



Contents

1	Understanding the Psychology of Teaching and Learning	1
	Understanding Educational Processes 4 Psychology and the Professional Status of Teachers 5 Focal Areas of Educational Psychology 6 The Learner 6 The Learning Process 7 The Learning Situation 9 What "Understanding" Means 10 Using a Variety of Viewpoints 10 An Awareness of Important Factors 11 Developing Insight 11 Thinking Causally 12 Making Valid Predictions 13 Focusing on the Behavior of Learning 13 Sources of Understanding 14 Laymen's Concepts of Education 14 Clinical Research 15 Experimental Psychology 16 Measurement Psychology 16 Social Psychology 17 Systems and Theories 18 Teachers' Experiences 18 Educational Psychology as an Applied Science 19 Statistical Concepts 20 Topics Dealing with Educational Psychology 21	
2	Why Learners Behave as They Do	25
	Internal and External Forces 27 The Attainment of Competence and Adequacy 28 "Need" Defined 30 Basic Needs 30 The Effects of Anxiety on Behavior 35 Origins of Anxiety 37 Responsiveness to Reinforcement 38 The Need for Stimulation 39 Genetic Aspects of Behavior 40 The Importance of Perceptual Factors 42 The "Self" 42 The "Self-Concept" 44 "Reality" Is How We Perceive It 45 Perceptions Change with Maturity 46 Motives That Lie "Beyond Awareness" 47 Behavior Is Both Purposeful and Complex 50	
3	The Growth and Maturation of the Learner	57
	Evidences of Growth and Development 59 The Concept of Maturity 61 Kinds of Maturity 62 Intellectual Maturity 63 Social	

Contents

Maturity 70 Emotional Maturity 75 Physical Maturity 79
Individual Patterns of Growth and Development 81 Accelerated and
Retarded Development 84 Developmental Tasks 86

4 The Learner and His Family 91

The Family's Contribution to Learning 93 Learning That Occurs
Incidentally 94 Similarities and Differences in Personality 96
The Family Situation 98 The Emotional Climate of the Family 101
Democratic and Authoritarian Homes 102 Individual Patterns of
Behavior 105 The Family as an Interpreter and Transmitter of the
Culture 106 Cultural Patterns 107 Social Classes as Molders of
Personality and Behavior 111 Social-Class Patterns of
Behavior 111 How an Understanding of Social Class Is Helpful 116
Meeting Educational Needs of Learners from Lower Social Classes 120

5 The Learner and His Group 127

The Need to Relate to Other People 129 Relationships with Others
during Childhood and Adolescence 130 Developing Relationships
with Others 131 The Preschool Years 131 Relations with Others
during the Middle Years of Childhood 134 Relationships with
Others during Adolescence 139 Using Sociometry 142 Social Forces
Influencing Behavior 149 Social Norms 149 The Relationship of
the Teacher to the Classroom Group 151 The Importance of
Communication to Sound Group Relations 153 Cohesiveness 153
Morale 154 The Emotional Climate of the Classroom 156
The Effects of a Competitive Climate 156 Prejudice 161

6 Emotional Health and Problem Behavior 169

Teachers' Attitudes toward Problem Behavior 171 Everyday Types
of Problems 175 Prevalence of Problem Behavior 177 No Child
Is Entirely Free from Emotional Problems 178 Dealing with Problem
Behavior 181 Emotional Problems of Everyday Living 182
Anxiety as a Basis for Problem Behavior 182 Mental Mechanisms 184
Rationalization 184 Displaced Hostility 184 Self-punishment 185
Repression 185 Conformity 186 Projection 186 Shyness 187
Daydreaming and Fantasy 188 Regression 188 Compulsiveness 189
Learning Mental Mechanisms 190 Conflict as a Basis for Problem
Behavior 190 Behavior Problems and Social-Class Background 192
Adolescent Rebelliousness 194 Prevalence of Problem Behavior

among Boys 195	Discouragement as a Factor in Problem Behavior 199
School Policies and Conditions That Are Detrimental to Mental Health 201	Ways in Which Schools Can Improve Mental Health 203

7 Traditional Beliefs and Ideas About Learning 211

The Learning Process 213	Everyone Has Some Kind of Theory about Learning 214	The Belief That Learning Occurs because the Learner Has Been Rewarded or Punished 217	The Belief That Learning Is Primarily a Process of Accumulating Knowledge 223	The Belief That Things Properly Taught Are Retained Indefinitely 224	The Idea That Learning Results from "Being Told" 227	The Idea That Learning Should Proceed Deductively 229	The Idea That Learning Transfers Automatically 232	The Belief That Learning Should Be Painful 234	The Belief That Learning Must Be Pleasant 235	The Prevalence of Traditional Beliefs about Learning 238
--------------------------	---	---	---	--	--	---	--	--	---	--

8 Psychological Conceptions of the Learning Process 243

Why We Need to Develop Theoretical Concepts 245	The Development of Theoretical Concepts Based on Science 246	Testing Popular Theories of Learning 247	Requirements of an Adequate Theory of Learning for Teachers 248	Assumptions Underlying an Adequate Theory of Learning 249	Motivation 252	Conditioning or Reinforcement Theories 253	Classical Conditioning 253	Operant Conditioning 254	Problems in Applying Operant-Learning Principles in the Classroom 255	Gestalt, Field-Theory, Cognitive, and Phenomenological Approaches 261	Gestalt Psychology 261	Field Theory 263	Learning as Problem Solving: A Cognitive Approach 265	Phenomenological Concepts of Learning 268	Applying Phenomenological Concepts of Learning 272
---	--	--	---	---	----------------	--	----------------------------	--------------------------	---	---	------------------------	------------------	---	---	--

9 Cognitive and Affective Factors of Learning 279

The Need for Attention 282	Intrinsic and Extrinsic Rewards 285	Inelasticity in the Learning Situation 288	The Learning of Skills and Information 289	The Learning of Concepts 290	The Learning of Attitudes 292	Attitudinal Patterns and Classroom Learning 293	Personality Factors 297	Readiness to Learn 299	Wholes versus Parts 300	Problems Encountered in Using the Whole Method of Learning 302	Levels of Aspiration 304	Anxiety as a Factor in Learning 306
----------------------------	-------------------------------------	--	--	------------------------------	-------------------------------	---	-------------------------	------------------------	-------------------------	--	--------------------------	-------------------------------------

10	Problems of Management in Classroom Learning	315
	Importance of the Teacher 317 Children's Behavior and Adult Standards 320 Difficulties in Being Objective about the Behavior of Children and Youth 321 Teacher Direction and Control of Learning 324 The Problem of Homework 327 The Problem of Examinations 329 Teacher-Centered versus Group-Centered Methods 331 Results of Teacher Domination 333 Loss of Integration 334 Perceptual Rigidity 336 Problems in Communication 336 The Improvement of Communication: A Function of Education 339 The Increasing Complexity of Educational Problems 342	
11	Discipline and the Learning Situation	347
	The Meaning of Discipline 349 Teacher-Imposed Discipline 351 Punishment 356 Group-Imposed Discipline 361 Self-Imposed Discipline 362 Task-Imposed Discipline 363 Class Management through "Stage Setting" 364 The Teacher's Role as an Anxiety Reducer 366 Arousing Normal Anxiety 369 Teachers' Anxieties about Discipline 370	
12	Building on Learners' Needs and Interests	377
	Deficiencies and Strengths of Traditional Approaches to Education 379 Newer Approaches to Education 381 The Use of Audiovisual Aids 384 Integrated Teaching 386 The Involvement of the Student in the Learning Process 388 Helping Students Learn from One Another 390 The "Activity Program" 393 The Project Method 393 The Use of Group Methods 395 Promoting the Major Objectives of Education 395 Group Relations in the Classroom 396 Group Discussion 398 The Use of "Buzz Groups" 402 Committees 404 Using Group Methods Effectively 405 Experimental Programs 407 The Present Status of Learner-Centered Methods 410 Criticisms of Learner-Centered Methods 410 The "Eight-Year Study" 412 Prospects for Learner-Centered Methods 414	
13	The Evaluation of Learning	423
	The Teacher's Role in Evaluation 425 Steps in Evaluation 427 Measurement, Evaluation, and the Use of Tests 428 Feedback in Evaluation 432 Attitudes toward Evaluation 433 Teacher-Made	

Tests 436	Oral Examinations 436	Essay Examinations 437
Choice-Type or "Objective" Tests 439	Reliability and Validity 444	
Standardization of Tests 447	The Growth of Standardized Testing 448	Standardized Achievement Test Batteries 449
Interpreting Test Results 451	State and National Testing Programs 454	Reporting Pupil Progress 457

14 Measuring Individual Differences

465

The Measurement of Individual Differences 467	Individual Intelligence Tests 467	Group Intelligence Tests 470	Stability and Change in IQ 471	What Intelligence Tests Measure 475
Are Intelligence Tests "Unfair" to Some Children? 476	The Problem of Underachievers 478	Aptitude, Interest, and Personality Measurement 482	Special Aptitude Tests 482	Interest Tests 483
Personality Questionnaires 485	Projective Tests 488	Observational Techniques 489	Public Criticism of Personality Testing 491	Measuring and Fostering Creativity 492
Creativity and Intelligence 492	Stimulating and Facilitating Creativity 494			

15 Learners Who Need Special Attention

501

Adapting Educational Practices to the Needs of Learners 503	Special Education for Exceptional Children 505	The Content of Special Education 507	Atypical and Typical Children 508
The Mentally Retarded Child 511	The Problems of Gifted Children 515	Special Programs for the Gifted 516	Ability Grouping 520
Emotional Problems: Speech and Reading Difficulties 524	Emotional Problems: The Delinquent 529	Vulnerability to Delinquency 532	Emotional Problems: The Disturbed Child 533
Identifying "Exceptional Children" 536			

16 Problems of the Socially Disadvantaged Learner

541

What Social Deprivation Means 546	The Slum Environment 546
The Home of the Socially Disadvantaged Child 549	Social Reinforcement 551
Postponement of Reinforcement 553	n Aff versus n Ach 553
"Good Behavior" versus Achievement 554	The Effects of Social Disadvantages 554
Differences in Mental-Growth Rates 554	Declines in IQ 556
Correlations between IQ and School Performance 556	Experiences of Negro Children 558
Personal Relationships with Teachers 559	Tasks for Remedial Programs 559

Preparation for Free Choices 559 Building Ego Strength 560
 Attitudes of Teachers in Remedial Programs 560 The Early Training
 Project at George Peabody College 561 Background 561
 Reinforcement of Learning Experiences 562 Developing n Ach 564
 Delay in Gratification and Reinforcement 565 Learning to
 Persist 566 Follow-up with Mothers 567 Results 568 The Need
 for Careful Planning 569 Programs for Older Students 570

17 Guidance Services—Individualized Help for the Learner 577

Problems of Mass Education 579 The Need for Individualized
 Education 579 The School Counselor 581 The School
 Psychologist 582 The School Social Worker 583 Medical
 Specialists 583 Administrative Personnel 584 The Need for Special
 Instruction 585 Personal Problems 586 Emotional Disturbances 588
 Vocational Problems 589 The Guidance Worker and the
 "Dropout" 590 The Able Student Who Does Not Go to College 594
 The Problem of Academic Pressure 596 Helping Schools Adjust to
 the Psychological Needs of Students 600 The Case Conference 601
 "Life-Space" or "Crisis" Interviewing 603 Collaboration of Teachers
 and Guidance Workers 605

18 The Psychology of Being a Teacher 609

The Importance of Self-Understanding 611 Instructional and
 Administrative Roles 612 The Instructor 612 The Teacher as a
 Model 614 The Classroom Manager 614 Clerk 615
 Youth Group Worker 615 Interpreter to the Public 616
 Psychologically Oriented Roles 619 The Artist in Human
 Relations 619 The Group Builder 620 The Catalyst 620
 Mental Hygiene Worker 620 Self-Oriented Roles 621 Social
 Service Worker 622 The Learner and Scholar 623 The
 Parent-Figure 624 The Power Seeker 625 The Security Seeker 626
 Disintegrative and Integrative Forces in Teaching 627 Conflicts in
 Roles 627 Conflicts in Expectations 631 Conflicts in Loyalties 633
 Teachers as Targets for Hostility 636 Effects of Disintegrative
 Factors 638 Integrative Factors in Teaching 638

References and Author Index 647

Subject Index 679

Probably everyone who has become a teacher has at times asked himself questions like these:

How can I get Frank to try harder in arithmetic?

What did I do that made the class so interested today?

How can I get my kindergarteners to clean up after they are through with water play?

How will students react when they get their grades on this test?

Is there not a better way to teach spelling than the one I am using?

Such questions are basically psychological questions. They are psychological in the sense that they are concerned with complex processes of human behavior: teaching and learning. These questions can be answered, but the answers are not simple and obvious because human behavior is not simple and obvious. For one thing, the answers will vary with different teachers, subjects, classes, and schools. Furthermore, the teacher's ability to find valid answers will depend, to a large degree, on the extent to which he understands his subject, his class, his school, and, of course, himself. It will also depend on his understanding of how students learn and how teachers can stimulate or facilitate learning. The usefulness or validity of the answers will depend on whether they are psychologically sound—in other words, whether they are based on principles that are consistent with the way in which people can be expected to behave under certain circumstances.

Psychology is a behavioral science—that is, it is a science concerned with the study of human behavior. It is a science that is concerned, among other things, with identifying reasons why people behave as they do and developing principles that can be used to specify how likely they are to behave in certain ways and under what conditions such behavior is likely to occur. What the concerns of psychologists have led to is an *understanding* of human behavior.

They have also led to the development of a number of different techniques that have been found useful in understanding specific instances of behavior. Such understanding is the chief contribution of psychologists, and the techniques they employ are valuable to the extent that they are based on or extend the understanding of human behavior. The word "understanding," as used in this way, has complex overtones, and we shall discuss them shortly.

Understanding Educational Processes. Educational psychology is an applied branch of the main field of psychology, that is, it consists of the application of psychological principles and techniques to the development of educational strategies and programs and to the solution of educational problems. Its chief function is that of helping people involved in education to develop a better theoretical and functional understanding of educational processes. By "better understanding" we mean a broader, deeper, and more effective understanding, an understanding that is based on scientific research and not on popular belief or folklore, an understanding that is more realistic and will lead to more effective teaching and learning. By "educational processes" we mean the behavioral changes that result from school experiences, particularly that kind of experience we call "classroom learning."

Everyone, even the most naïve kindergartener, has *some* understanding of educational processes. Perhaps the college students who enroll in teacher-education courses have somewhat more understanding of education than most people, because they must have thought about education for some time, probably years, before deciding that they wanted to become teachers. Furthermore, as they themselves participated in the educational process that preceded their entrance into the teacher-education program, they developed concepts and ideas of what education is, what it does, and how it functions. To a large extent, however, the understanding of educational processes possessed by students enrolling in courses in educational psychology is what might be termed "prescientific"—that is, it is an understanding largely composed of common sense, personal reactions, and personal evaluations, all rather generously conditioned by popular belief and even folklore about the nature of those processes known as teaching and learning. We also use the term "prescientific" to indicate a kind of understanding that precedes and hopefully may be supplanted by understanding more firmly based on scientifically derived concepts. Much of this nonscientific understanding is valid and useful, but much of it is not, as we show in our discussion in Chapters 7 and 8 of popular beliefs about education. It is useful in the sense that it gives the student some point of reference or point of departure in studying a new professional field, like education, but it is not useful and is even detrimental when it *prevents* learning—when, for example, it keeps the student from adjusting his pre-

ful for the assistance of Harold L. Wee Director of Research, San Francisco City Schools, who read and criticized the chapters on measurement and evaluation. Finally, thanks are due to my wife, Fredi, who helped with the manuscript and preparation of the publication.

Preface to the First Edition

The writing of a textbook in educational psychology is an ambitious project. Teaching is a difficult enough skill in and of itself, and to presume to tell people via the printed page how they might become better teachers, even before they have begun to teach, is to be both ambitious and presumptuous. The very scope of the undertaking has a sobering and humbling effect on an author.

On the other hand, the task of communicating through the medium of a textbook what psychologists are learning about educational processes is both a challenge and an opportunity. Teachers stand in urgent need of the kind of understanding and insight that may be gained by communicating with psychologists. It is not so much that teaching today is done badly but rather that the unachieved potential of education is so great. The community needs parents, leaders, and citizens who are understanding, skillful, reasonable, and responsible. Increasingly, we look to the school to develop these qualities in the students they educate and graduate, and, concurrently, we tend to blame the school, rightly or wrongly, when graduates fail to meet these standards. Hence today's schools cannot "get by" merely by teaching the basic skills—they are also expected to produce graduates who are personally, socially, and intellectually adequate and effective. Because such qualities cannot be developed through traditional methods of drill and recitation, it becomes more imperative than ever before that teachers understand the processes of education and the development of human behavior. This means that every teacher must to some extent become a practicing psychologist—in the sense of becoming a student of human behavior.

Probably many students who enroll in a course in educational psychology have already had a head start in their study of human behavior as a result of having completed a general introductory course in psychology. If they have, so much the better. Although some of the concepts introduced in this text will already have been covered in the introductory course, the treatment accorded them in a textbook of this sort should help give them a new and

Preface to the First Edition

deeper meaning. The chief difference between educational psychology and general introductory psychology is a matter of focus and emphasis. Educational psychology is psychology applied to the teacher-learning situation. Whereas introductory psychology has the purpose of helping students to develop a *general* understanding of human behavior through the application of the scientific method, educational psychology attempts to help the student to *apply* both the understanding and the methods of psychology to problems encountered in teaching-learning situations.

A textbook in educational psychology should not be regarded as an all-knowing oracle. It cannot provide solutions for the more or less individualized problems that teachers are bound to encounter in classrooms. But a textbook can help teachers solve such problems by preparing the way for professional understanding and insight.

To the author, such preparation means that the textbook should help teachers and prospective teachers to perceive learners and learning situations in new and different ways. In other words, he hopes that persons who read this book will develop points of view that will be different from the ones they would have had if they had not read the book.

The teacher who can react to a classroom problem from one point of view only—usually that of frustration or exasperation—is at a disadvantage. His only choice is that of repeating the methods which have already produced the difficulty or of reprimanding or otherwise punishing the children for their failure. The teacher who is able to examine a problem from a variety of aspects has the advantage of being in a position to use several different approaches. Furthermore, he is also likely to see himself as a factor in the situation and is thus able to see how *his* behavior contributes to or affects the problem under consideration.

An improved understanding of both human behavior and learning situations hence must imply a certain amount of self-analysis and self-understanding. It is hoped, therefore, that students who read this book will come to know and understand *themselves* better both as persons and as teachers—as individuals in learning situations. It is almost axiomatic that the understanding of the behavior of other persons (including children) develops in direct proportion to the growth in understanding our own behavior. Furthermore, unless students are able to relate the learning that takes place in educational psychology classes to their own experience, any advantage to be gained from having taken the course and read the book will be lost once the course is over. Indeed, experience with teachers taking in-service training has led me

to suspect that many of them have neither been encouraged nor helped to relate what they have learned in educational psychology courses to their personal experience. In this book, therefore, special efforts have been made to encourage students to see the relationships between the findings and hypotheses of psychologists and the events of everyday life.

I also hope that students reading this textbook will be encouraged to adopt what might be termed "the scientific point of view" with regard to the data of their professional lives. If teachers and teachers-to-be attain this point of view, it will mean that they will have developed an interest in probing into the causes and effects of classroom problems and events. It means also that they will maintain an enlightened skepticism and an open-mindedness with regard to their own findings as well as to the claims and pronouncements of professional and lay figures alike.

And, finally, I hope that readers will gain a better understanding of their roles as teacher-psychologists, as artists and scientists in the field of human relations, to the end that the inevitable frustrating experiences of the classroom will not lead to cynicism, apathy, and discouragement but will instead lead to study, understanding, learning, professional growth, and an increased interest in the psychological problems of education.

The case material used at various points in this book is drawn from my own experiences, as well as from those of my colleagues, students, and counselees. I have embroidered on these incidents rather freely, changing names and situations, partly to disguise the identity of the chief figures, but also to highlight the points that the cases were selected to illustrate. Hence they are to be considered as fictional creations, rather than as clinical reports, although they are drawn from life and are as realistic as I can make them.

It would be difficult, indeed, to give full credit to all the persons whose help and ideas have made this book possible. There are the writers, like Dr. Hilda Taba, of San Francisco State College, who describe the factors that underlie classroom behavior so succinctly and vividly. There are the educational leaders, like Dr. I. James Quillen, Dean of the Stanford School of Education, whose lectures during my graduate years helped to give focus and purpose to my ideas about education. There are my colleagues in the Psychology Department at San Francisco State College, like Professors Albert Lepore and David Freeman, whose understanding of children and teachers and whose insight into the educational process are a continual source of information and inspiration. This book is to a large extent the product of the personal contributions and encouragement of dozens of such people over

Preface to the First Edition

the last twenty years or so. However, I would especially like to express my appreciation of the help received from Dr. Henry Fea, of the University of Washington, and Dr. Paul Wendt, of Southern Illinois University, who read the manuscript and made many helpful comments.

Henry Clay Lindgren

San Francisco State College
January 1956



Wayne Miller—Magnum

one teacher used her understanding of the learning process to create a situation that helped to stimulate learning:

In Class A the slow-learning children seemed hopeless and unhappy. In Class B, all the pupils were alert and interested. What made the difference? In Class A the teacher called on one of the older girls to define a word. The girl gave the correct idea of the word but did not state it in a complete sentence. All the teacher said was, "Wrong." The child slumped down in her seat, having failed before the group. In the other class, the teacher asked for a definition of *museum*. One boy said, "It's a place where fish are kept." Instead of saying "Wrong," the teacher asked, "Where did you get that idea?" The boy explained, "I went to a museum and saw a skeleton of a whale there." "That's true," the teacher said. "They do have skeletons of fish in museums, but the place where *live* fish are kept

Educational Psychology in the Classroom

is called—" Someone said, "An aquarium." This teacher, in contrast to the other, was curious about how children get ideas, how they learn. She built on what was already in their minds. She was concerned with the learning process—the effect of the class experience on the child's development—and not merely with the results of the process as measured by facts acquired.

Most people think of education principally in terms of the learning situation, particularly the part played by the teacher. The teacher is seen as someone who produces learning by arranging or manipulating the learning situation—by making assignments, giving grades, explaining, testing, or whatever. It is true that of the three aspects of education we have discussed, the learning situation is the aspect that can be more directly controlled by the teacher, although he does not have as much control as is popularly thought. Furthermore, to think of education only in terms of the teacher's attempts to control the learning situation is to overlook the great importance of the part played by the learner and the learning process. In addition, such a point of view makes education appear deceptively simple—more mechanical than it actually is. It ignores the essential dynamic and vital facts of education—namely, that learning is an ongoing, continuing process, and that the learner is a growing, changing organism. One of the important contributions that the educational psychologist can make to the understanding of education is to help both teachers and laymen to broaden their concepts of education to include the learner and the learning process. He can also help by showing that the learning situation is not confined to the classroom but reaches out into the community and the world outside.

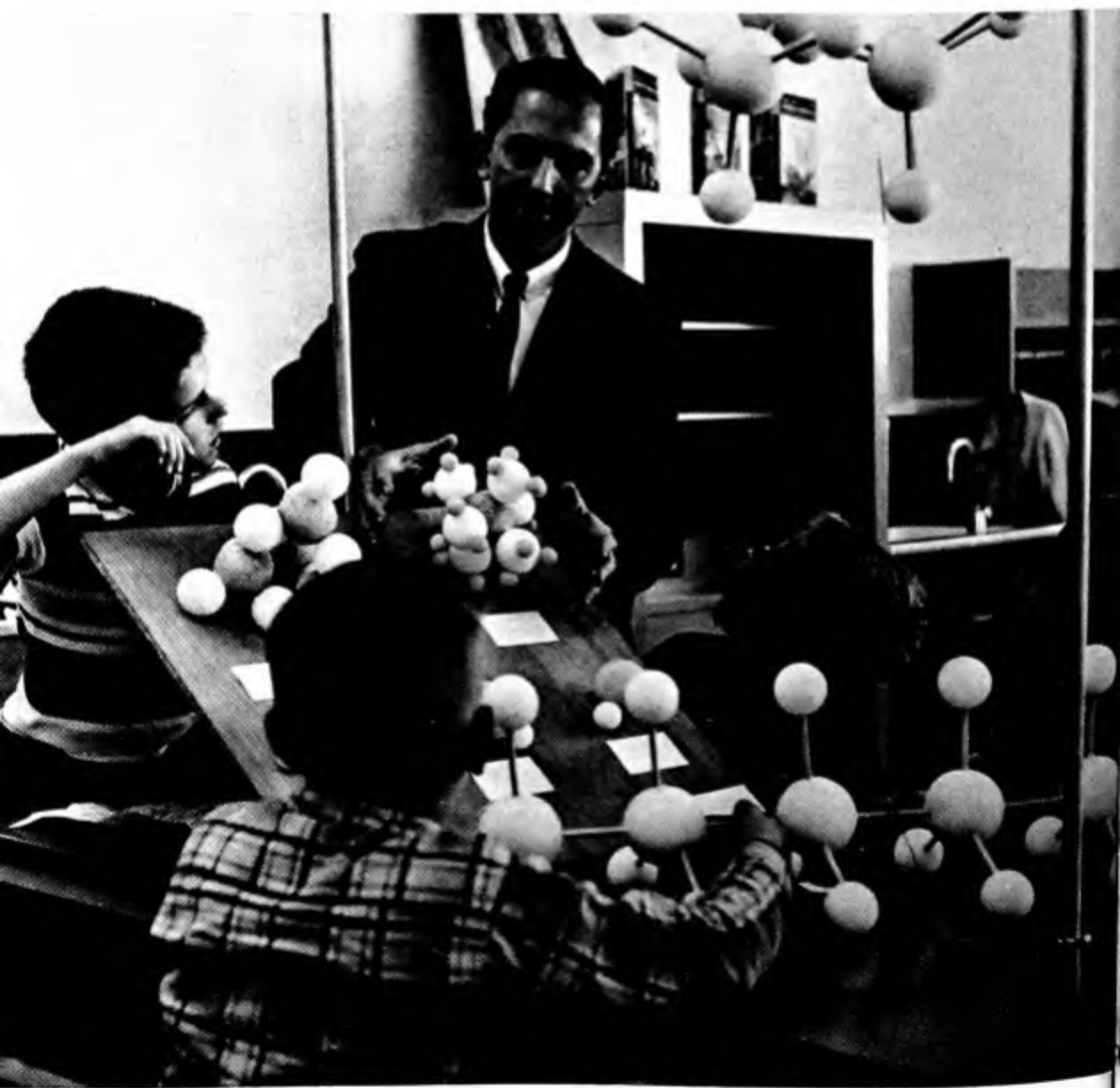
WHAT "UNDERSTANDING" MEANS

In our discussion of what is meant by the terms "learner," "learning process," and "learning situation," we have indicated what it is that the teacher needs to understand in order to carry out his professional role. The term "understanding" itself also deserves some interpretation. Teachers who do not know children very well do not relate the restlessness of children to their having been kept indoors because of bad weather. Or, to use an example cited earlier, they do not see the relationship between learning difficulties in the classroom and the existence of widespread prejudice toward education on the part of the community. They do not see that if parents think education a waste of time, children will also tend to consider it a waste of time.

Using a Variety of Viewpoints. Understanding also means being able to explain, and explaining something means describing it from different aspects, levels, and points of view. The mechanic sees an automobile not only in terms

1 Understanding the Psychology of Teaching and Learning

1398



Audio-Visual Services, Alameda County Schools

of its function as a vehicle but also as an arrangement of moving parts, as a consumer of liquid fuel, and as a producer of electrical energy. He sees it as a sensitive mechanism whose component parts must be adjusted to proper balance and harmony, if it is to operate properly. He also sees it as a mechanism that has strength and power. The perceptive teacher sees a certain child as having most of the characteristics of a typical ten-year-old girl. He sees her as the product of her social environment, conforming, more or less, to the patterns of behavior prescribed by those around her. He sees her as someone who has certain individual characteristics that distinguish her from other children of her age and sex. He sees her, too, as someone who approaches learning situations in arithmetic with confidence, but who needs encouragement and emotional support with her reading. He sees her as someone who stands a little apart from the other girls in her class, as a girl who would rather play with boys, if they would let her. He also sees her as someone who is slightly "above her grade" in arithmetic and science, and slightly "below her grade" in English and social studies. During the period this teacher has been working with this child, he has collected a great many facts and impressions about her. Some of these facts and impressions he finds helpful in explaining her behavior as a student and as a person. Because he is able to make these explanations to himself (or to others, if need be), he can understand her better.

An Awareness of Important Factors. Understanding, too, means developing an awareness of important factors. A good mechanic knows that the condition of the paint or the grill work on an automobile has nothing to do with its mechanical condition, although he has probably learned from experience that the person who does not take proper care of the exterior of his car is not likely to take proper care of its moving parts. Similarly, an experienced kindergarten teacher is not particularly disturbed if a five-year-old wets his pants the first day he comes to school. To be sure, she will take steps to prevent a recurrence, but she will recognize that the first day of school is a trying experience for five-year-olds, and that such incidents are part of the day's work for the teacher. On the other hand, she will be alert to pick up any really unusual behavior a child might display, particularly if it continues over a period of time. The behavior may not in itself be disturbing. For example, a child may simply be slow about reacting to directions or suggestions. From observing the child, the teacher may get a hunch that he is slow because he does not hear very well, and that he is watching other children for cues as to what he should do next.

Developing Insight. Being able to identify the really important factors in a situation is an essential part of being a teacher, just as it is an essential part

of good practice in any profession. This is a part of teaching that cannot be learned from a book, although "book learning" can often stimulate an alertness to the clues that *suggest* the presence of important factors. Furthermore, teachers who have already developed the knack of getting the "feel" of a classroom situation often find that their skill and sensitivity are broadened and deepened through reading appropriate books. Of course, there are teachers with many years of experience who have not yet developed this sensitivity to the crucial factors in a situation. These are the teachers who continue to make the same wrong moves, who seem to have a genius for developing resistance instead of cooperation among students.

Psychologists sometimes call the ability to get the "feel" of a situation "insight." Often teachers are hard put to account for hunches or feelings that later turn out to be quite accurate. Let us use the experience of the kindergarten teacher we mentioned just above, whose hunch that the slow-reacting child was hard of hearing turned out to be correct. We might ask her why she felt that the child was hard of hearing, instead of, say, mentally retarded. She might reply somewhat as follows: "Well, I suppose I could say that it was because he could build block trains and draw pictures which were a lot like those done by other children his age. But I think that the real reason was that he didn't *act* like a child who was really retarded or who had brain damage or anything like that. He just acted like other children I have known who had a hearing loss."

Thinking Causally. The teacher was able to take the first step toward understanding the behavior of the hard-of-hearing child because she "thinks causally"—that is, she reacted to the child's behavior with the question: "What causes him to behave that way?" The first step toward increased understanding often occurs when we ask ourselves the question: "What *causes* that?"

The fact that this teacher cannot readily put her feelings and reactions into words does not detract from their validity. Some of the most fundamental experiences of everyday life defy adequate translation into words. On the



Charles M. Schulz; © United Feature Syndicate, Inc., 1959.

The most effective teachers are those who understand learners and learning behavior, but such understanding is acquired neither quickly nor easily.

other hand, mere strength of conviction does not give validity to observations. In all likelihood, the beliefs of unsuccessful and inadequate teachers are as strong as those of successful ones. How, then, can we distinguish between valid and invalid hunches?

Making Valid Predictions. We come now to our last definition of understanding. Understanding a child means being able to make reasonably accurate predictions about his behavior. Thus the hunches of successful teachers are more likely to prove correct than the hunches of unsuccessful ones. However, we do not always have to base our predictions on hunches, and this is one of the reasons why courses such as educational psychology are a part of the professional curriculum for teachers. Psychologists and educators have been studying various aspects of education for many years in search of factors that are related to success and failure in learning. These factors include methods and techniques, personality, maturity, heredity, physical surroundings, motivation, and emotional climate, to name a few of the many factors that have been explored. Although there is much yet to be discovered about learning and the conditions under which it occurs, we have nevertheless been able to accumulate a respectable body of research data that is very helpful in clarifying much of what affects learning in the classroom as well as outside. For example, selecting students who will succeed in college is much less a matter of hunch and guesswork than it was a generation or so ago. To be sure, we can make better predictions for *groups* of applicants than we can for individuals, but such predictions, if properly used by a high school counselor, can be of immeasurable help in assisting students to decide which college to enter or whether entering college is a wise idea. Or we can show that introducing certain number concepts when children are six years old will mean that most of them will fail, whereas introducing the same concepts when the children are eight years old will produce a high percentage of successes. These are two of the many kinds of predictions that educators and psychologists, working together, have been able to make. Because these predictions, as well as the data on which they are based, are available to the educational profession, we have a better understanding of the learner, the learning process, and the learning situation.

Focusing on the Behavior of Learning. Unless a teacher has a good understanding of the fundamentals of human behavior, he is likely to fall into the common trap of evaluating the behavior of children in terms of its effect on *him* rather than in terms of its probable causes. If so, his reaction is likely to be one of annoyance and retaliation, rather than that of understanding. In other words, he is likely to worsen a difficult situation, instead of improving it. Louis Kaplan (1952) found that 84 per cent of the conditions that annoyed

teachers were related to some phase of child behavior. He interpreted his research as follows:

The type of child behavior which distresses teachers suggests that perhaps teachers are being disturbed by child behavior patterns which are normal for children but unpleasant for adults. For instance, 72 per cent of the teachers were disturbed by children who were careless in their work or appearance. If teachers could reconcile themselves to the fact that such behavior is often a normal characteristic of children, they might be spared some needless anxiety. . . .

The fact that teachers are greatly distressed by children who are indifferent to school work, do not complete assignments or do not work up to capacity suggests that teachers and children are often at cross purposes regarding the significance and nature of school activities. It is known that children will learn effectively when they enjoy what they are doing, see a reason for it and have a part in setting up their learning tasks. Perhaps teachers are not giving sufficient emphasis to the establishment of a favorable climate for learning, and as a result are distressed by the normal reactions of children to frustrating learning experiences.

SOURCES OF UNDERSTANDING

Laymen's Concepts of Education. One of the reasons why teachers are often more concerned with the effect a student's behavior has on them rather than with understanding itself, is that their approach to learning has been conditioned by attitudes and beliefs about education they have picked up from laymen—that is, from the nonprofessional, nonteaching public. The layman's concept of education is likely to be a mixture of prescientific information and misinformation about desirable practices in teaching and learning. We commented earlier in this chapter that such concepts might interfere with the development of an effective psychological understanding of educational processes. Unfortunately, many teachers have not developed a more scientific approach to their job because they have been slow to realize the growing importance and status of their profession. The fact that teachers tend to have less professional consciousness than people in other professions is demonstrated by a survey conducted by Solomon Rettig and Benjamin Pasamanick (1959), who found that teachers tend to be more concerned with the recognition and appreciation they might receive from persons *outside* their profession, whereas people in other professions were more concerned with recognition by their colleagues and other members of their profession. The teacher who is continually looking to laymen for appreciation, who is overly anxious about the opinion that laymen have of him and his work, who seeks their praise and approval and is upset by their criticism, is the teacher who will be guided by

lay conceptions of teaching and learning. Because laymen's thinking about educational processes is largely prescientific, such teachers are likewise going to fall into prescientific ways of thinking about their work.

In defense of teachers, however, we should point out that it is largely in the last generation that psychology (which is itself a new science) has made any contributions to the understanding of educational processes. As these contributions become more significant, and as teachers gain a greater appreciation of their own profession as a special field, there is every expectation that their prescientific notions about the teaching-learning process will be replaced by more scientific ones.

The task of the educational psychologist in gathering and interpreting data that might be of some use to teachers is one that grows increasingly complex with each succeeding year. A generation ago, the task was considered much simpler, because it was largely one of applying the findings of the psychological laboratory to classroom practice. But the educational psychologist today finds that there is an increasing amount of research carried on outside the psychological laboratory that is of psychological importance and that has a direct or an indirect bearing on learning.

Clinical Research. For example, people working in the field of mental hygiene—clinical psychologists, psychiatrists, psychiatric social workers, and counseling psychologists, to name some of the major professional groups—are doing a steadily increasing amount of research and writing. Much of their work is based on what is called “clinical research”—the compiling of careful observations of the behavior of individuals receiving help for emotional difficulties. The hypotheses resulting from these observations are discussed in formal and informal consultation with other mental hygiene workers and are tested further in clinical practice. Although some of the concepts that result from this kind of research have only been partially validated by experimentation, many of them have proved to be useful in explaining the behavior not only of children, but also of adults who work with children. These hypotheses are often fitted together into large-scale theories that are used to explain broad ranges of human behavior. The theories relating to basic needs and anxiety that we discuss in later chapters are examples of the kind of concepts that have resulted from clinical research.

The question sometimes arises as to whether findings based on the study of psychologically disturbed persons are really applicable to the “normal, everyday children” we have in our classrooms. Experience and research both show that there is no essential difference between the *kinds* of problems faced by psychologically disturbed individuals and those faced by anyone else. The difference lies primarily in the *degree* of disturbance, not the kind. Further-

more, no one is completely free from psychological problems, and the intensive study that clinicians are able to give to the problems of their patients is often useful in providing clues to the problems of so-called "normal individuals."

Although prescientific concepts of learning and human behavior have to some extent interfered with the ability of teachers to learn from mental hygiene workers, there has been considerable progress. After making a survey of research studies concerned with the attitudes of teachers and mental hygiene workers, Harry Beilin (1959) reported that teachers have in the last thirty years made very significant gains in their ability to use psychological concepts in evaluating the behavior of children. It is interesting to note that elementary teachers have made greater progress in this respect than have secondary teachers.

Experimental Psychology. Another professional worker in the field of psychology who makes important contributions to our understanding of educational processes is the experimental psychologist. His research takes place in the laboratory, or in other specially prepared and controlled situations, where he studies the behavior of human and animal subjects. Whereas the findings of mental hygiene workers are often based on judgment and interpretation, the experimental psychologist attempts to eliminate the "personal factor" as much as possible in order to increase objectivity and improve accuracy of measurement. In his attempts to screen out all possible sources of error or bias, he prefers to confine his research to rather severely restricted areas of behavior and to avoid the practical problems of teaching and learning encountered in the classroom. Some of the research conducted in the psychological laboratory is beginning to pay off in terms of novel solutions to the problems of classroom learning, such as the teaching machines that attract a great deal of attention today. But the major contribution of the experimental psychologist lies in his insistence on the use of proper scientific methodology, his passion for accuracy and objectivity, and his skepticism about untested hypotheses. This is a contribution that keeps other psychologists and educators continually aware of the tentative nature of much of our knowledge about educational processes. We need both kinds of research; clinical, because of the broad, encompassing view it gives us of human behavior, and experimental, because of its emphasis on accuracy and objectivity.

Measurement Psychology. Learning inevitably involves evaluation, and evaluation inevitably involves measurement. Measurement psychologists have been making contributions to educational psychology from the very beginning; indeed, the most commonly reported second interest of members of the American Psychological Association's Division of Educational Psychology is psychological measurement, followed by developmental (child) psychology and counseling psychology.

Measurement techniques are associated with precision, scientific attitudes, objectivity, and a research orientation. A great many clinical psychologists and teachers object to an emphasis on measurement, claiming that it tends to "dehumanize" teaching and thus leads to a preoccupation with only those aspects of teaching and learning that are quantifiable and that may not, in the long run, be very important. The counterargument to this objection is that a lack of concern with objectivity and measurement makes it very difficult to evaluate the results of teaching strategies. How can a teacher, for example, tell whether one approach is better than another unless he has some way of measuring and comparing their effects? How can he make any comparisons among his students, in order to understand their aptitudes and backgrounds better, unless he makes use of some kind of measurement?

Social Psychology. A major portion of the teacher's time is spent in dealing with students in groups. The more he understands about the principles of group behavior, the better able he is to deal with the forces and factors that operate in group situations and that facilitate or inhibit learning. Each student is, furthermore, a member of several overlapping social groups: the family, the neighborhood, the community, the ethnic group, the social class, and so forth. These groups make certain implicit demands on the student and order his attitudes and behavior in certain ways. The teacher himself is a member of groups who have pronounced effects on attitudes and behavior. An understanding of groups and the effects on the behavior of their members is a prerequisite to dealing intelligently with group behavior.

Many educational psychologists today have come to think of themselves as applied social psychologists, because they have found that social psychology serves as a base that enables them to combine a number of elements within a functional framework. As social psychologists, they can develop and make use of measuring instruments and other scientific techniques, they can function as researchers in the classroom as well as in the laboratory, and they can maintain a balance between the more scientific and the humanistic sides of psychology and education without doing unnecessary violence to either. Social psychology shares an interest with clinical and counseling psychology in personality, personal development, and the effect of attitudes on behavior. In fact, much recent research on emotional factors (including attitudes) in classroom learning is of interest to social psychologists and has actually been carried out by them.

Social psychologists in education also play a role in providing a bridge between the teaching profession and other behavioral scientists, such as sociologists and cultural anthropologists. This has worked both ways. Through socially oriented educational psychologists, teachers have been introduced to sociological and anthropological data about learners, and behavioral scientists

have discovered that the school is a useful laboratory in which to test theories.

Systems and Theories. Philosophers and educational theorists have also had their effect on educational psychology in that they have led us to re-examine both purposes and methods and to experiment with new techniques. Some of the questions raised by philosophers like John Dewey and Alfred North Whitehead have led to the introduction of new methods and changes in the curriculum which have, in turn, kept educational psychologists busy comparing the new with the old.

Teachers' Experiences. Probably the largest group of contributors to educational psychology as an applied science are the people who are also its most important "consumers"—the teachers themselves—for it is they who provide the impetus and stimulus that are the beginning of many a research project. Teachers question methodology, they improvise and innovate, they experiment with new methods and new curricular materials, they start chains of questioning that eventually come to the attention of the educational psychologist, they make demands for certain kinds of surveys and studies. Not all their demands produce the results they want or expect. For instance, the demand for smaller classes has resulted in much research on class size as related to effectiveness of education, but findings so far fail to provide evidence that smaller classes are more efficient (Newell, 1944; Spitzer, 1954). Nevertheless, research continues on this and other problems raised by teachers and administrators, with the result that our understanding of the psychology of education and of learning continues to be increased and enhanced.

The expansion of the behavioral sciences and the increasing momentum of the mental hygiene movement during the last generation have produced a wealth of ideas, concepts, and research that have helped to broaden the scope of educational psychology, until it has become coextensive with education itself. Lee J. Cronbach (1950) had this to say about the changing emphasis in educational psychology:

Traditionally, educational psychology was oriented toward increasing the "efficiency" of formal education. But since learning takes place everywhere, all the social influences impinging on the child are educational forces. In view of this, the task of guiding development is seen to be exceedingly complex, and "efficiency" becomes almost indefinable.

It is true that some educational psychologists still regard themselves primarily as laboratory-oriented scientists, preferring to carry on research in rather narrow or specialized aspects of learning efficiency. There is no question that this kind of work must continue, for it has much potential value for classroom teaching. However, there is a growing number of educational psychologists

who feel that their best functions are served if they work in close collaboration with teachers, not only on problems relating to educational measurement and learning efficiency, but also on problems in such fields as mental health, group relations, classroom communication, and parent-teacher relations. Although the broader scope of educational psychology today has made it far more complex and perhaps less exact and well defined than it was even ten or twenty years ago, it has developed possibilities and resources that render it of much greater potential value to the teacher.

EDUCATIONAL PSYCHOLOGY AS AN APPLIED SCIENCE

Educational psychology, as Arthur Coladarci of Stanford University puts it, represents the empirical foundation of education¹—that is, it represents those aspects of education which can be verified by experimentation, testing, and observation, what might be called the “scientific basis of education.” In the final analysis, progress made in educational psychology is bound to affect the philosophical bases of education. If, for example, experimentation and observation show repeatedly that the ability of children to solve complex problems is not developed very readily in autocratic settings, we are forced thereby to reexamine and eventually make changes in the relationship between teachers and children. Such changes cannot occur unless they are accompanied or preceded by changes in educational philosophy.

Much of the potential effectiveness of educational psychology is lost if it remains so specialized a science that its methods and findings do not become a part of everyday teaching, if teachers do not, in effect, become “educational psychologists” in their own right. This means that teachers must learn to apply scientific methods to their own classroom practice. It also means, according to Coladarci, that they must come to think of teaching (selecting methods and techniques of presenting material, constructing curricula and courses of study, choosing textual materials, and so forth) as a process of “testing hypotheses about behavior.” In other words, the teacher must adopt an “experimental attitude” toward his efforts. As he makes decisions regarding classroom procedure, he should be saying, in effect: “I am betting that *this* way of organizing *this* class will help *these* pupils to achieve *these* educational objectives.” This approach has the advantage of requiring the teacher both to seek continually for the best data on which to base his decisions and to test the adequacy of these decisions by continual checking and rechecking. It can also provide the basis for genuine professional growth. Indeed, much of the

¹ Personal communication to the author.

progress made by education during the last generation or so has been due largely to the readiness of teachers to apply this extension of the scientific method to their own work. As Coladarci so aptly points out, where teachers are unwilling or unable to use the methods and findings of educational psychology in their teaching, they have no choice but to teach by habit, dogma, rule of thumb, or sheer guesswork—methods based on prescientific concepts of educational processes.

Throughout the book we have tried to approach the task of the teacher from two points of view, both of which are consistent with educational psychology as it is developing today: (1) that of the applied scientist who is able to select, plan, and evaluate his teaching strategies with a calm, objective eye, and (2) that of the skilled practitioner, artist, or clinician, who has a feeling for the basic elements of his work, who respects himself and respects his students, and who is dedicated and committed to making the teaching and learning in his classroom as effective as possible.

In presenting both the research and the practical-clinical side of educational psychology in this book, we will try to show how one supplements the other, how research findings of both the experimental and the social psychologist often suggest causes, relationships, and strategies that the practitioner might otherwise overlook, and how the hunches that emerge from classroom data provide hypotheses that can be checked by the more precise research methods of the experimental and the social psychologist.

Statistical Concepts. We have avoided detailed descriptions of experimental method or statistical findings in presenting this research. Instead, we have limited ourselves to a few simple statistical concepts—those of the mean or average, percentage, and correlation. Most students are already conversant with concepts of the mean or average and of percentage, but correlations may be a new idea, although the underlying principle is a simple one. A correlational coefficient is a single figure or number used to describe the *relationship* between two variables (anything that can be measured is a variable). The relationship between any two variables picked at random is likely to be zero. For example, there is no relationship between the monthly snowfall on the California Sierra Nevada and the monthly totals of the amount of gold in Fort Knox. These two variables have nothing in common, and there is no reason to expect that the correlation between them would be anything but zero. On the other hand, we do expect that there would be a relationship between the number of years of education completed by each of 1000 people selected at random and their annual income. The two measures, years of education and income, vary in the same direction: the higher the income, the higher the education, and the lower the education, the less the income. The

correlation between the two variables can be expressed in a single, positive figure, say, $+ .35$. It should be emphasized that $+ .35$ is not a percentage, but is instead a way of expressing the extent to which the two variables, education and income, show trends that are similar.

When high scores on one variable are accompanied by low scores on another, correlations will be negative. During childhood and adolescence, for example, we would expect a negative relationship between the number of hours of sleep required and the age of children and youth—the greater the age, the fewer hours slept, and the more hours slept, the younger the child is likely to be. Such a correlation might be expressed as, say, $- .35$.

There are only a few graphs and tables in which we express a relationship between variables in terms of correlational coefficients. In each instance, the interpretation of the figures used will probably be obvious from the text and the description of the figure or table, but it may be well to keep this page in mind in case there happen to be problems of interpretation.

Topics Dealing with Educational Psychology. The chapter order in this book follows the structure that we have outlined earlier: the first group of chapters is concerned with the *learner* (Chapters 2 through 6), the second with the *learning process* (Chapters 7 through 9), and the third with the *learning situation* (Chapters 10 through 18).

In the first section, Chapter 2, entitled "Why Learners Behave as They Do," covers certain concepts of personality development and motivation that are basic to the discussion in the following chapters of the book. In this chapter are introduced such concepts as basic human needs, anxiety, social inheritance, the self and the self-concept, the unconscious nature of human motivation, and the complexity and purposefulness of behavior. Chapters 3 through 6 are concerned largely with the growth and development of children as individuals, as members of families, and as members of peer groups. Chapter 6 sketches some of the emotional conflicts that may result in problem behavior. Chapters 7 through 9, as we noted, take up the learning process. Chapter 7 contains a discussion of some of the theories or concepts that are part of our cultural tradition and that underlie our everyday attitudes as well as our classroom practices. Chapter 8 deals with the concepts of learning developed by psychologists. Chapter 9 is concerned with both cognitive and emotional factors related to learning.

The latter half of the book, as we indicated, deals with different aspects or dimensions of the learning situation. Chapters 10 through 13 are concerned with the application of concepts, theories, and research findings to the classroom situation. Chapters 10 and 11 discuss classroom management—with particular emphasis on control, organization, and structure—and classroom order.

Chapter 12 is concerned with teaching-learning approaches that are based on students' interests and psychological needs.

Chapters 13 and 14 deal principally with measurement from the standpoint of evaluation and of individual differences among learners.

The learning situation as it applies to children who need special help and attention is the chief focus in Chapters 15 and 16. The material in Chapter 16 is related specifically to the problems of socially disadvantaged children and teachers who work with them. Chapter 17 is concerned with guidance and pupil personnel specialists and their work with teachers and students. The final chapter discusses the psychological roles that are an essential part of being a teacher, as well as some of the integrative and disintegrative factors and forces that make teaching a profession that is both frustrating and satisfying.

SUMMARY

The kinds of questions that teachers ask about classroom teaching are to a greater or lesser degree psychological questions, in the sense that they are questions about human behavior. Psychology is a science concerned with the understanding of human behavior, and educational psychology is an applied science concerned with helping teachers understand problems of teaching and learning. Although most students of education have some understanding of educational processes before they begin their professional training, much of this understanding is "prescientific" in that it is composed largely of common sense, personal reactions, personal evaluations, popular beliefs about education, and even folklore. Some of this background is valid and useful, but much of it is neither valid nor useful and may actually interfere with the development of a more scientific understanding of the teaching-learning process. The teacher's social and professional status has increased in recent years partly because of the greater social value placed on his services and partly because he has become more of an educational psychologist.

Educational psychology is concerned with the development of an understanding of three focal areas: the learner, the learning process, and the learning situation. These three areas overlap and are interrelated. There is a tendency for teachers to be overly concerned with the learning situation and to ignore the learner and the learning process. By "understanding" we mean seeing relationships in human behavior that are not apparent at first glance, being able to explain behavior from various aspects and points of view, developing an awareness of important factors in behavior, identifying the causes of behavior, and making accurate predictions about behavior. Without under-

standing, a teacher is likely to fall into the trap of reacting to students' behavior in terms of its effect on *him*, instead of its background or other significant aspects.

Many ideas that teachers have about teaching and learning are picked up from laymen, whose opinions tend to rate higher with teachers than they do with most other professions. As teachers gain better understanding of their professional tasks, they are likely to discard some of their prescientific notions. Some of the understanding educational psychologists are providing comes from clinical research, and some comes from the psychological laboratory. Measurement psychologists have also made significant contributions, and the role played by social psychologists is assuming great importance. Indeed, many educational psychologists are coming to think of themselves as applied social psychologists. Teachers themselves are an important source of data, because they provide hypotheses and methods that can be tested through research. Teachers should become "educational psychologists" in their own right and use scientific methods in experimenting with and studying methods in their own classrooms.

SUGGESTED PROBLEMS

1. Put yourself in the place of a child just completing the first grade. What are some of the concepts he would very likely have developed regarding the learning process and the learning situation?
2. Where does subject matter (what is to be learned) fit into the triad of the learner, the learning process, and the learning situation?
3. It has been stated that the behavioral sciences (including educational psychology) are at about the same relative point in their development at which the biological and physical sciences were a hundred years ago. What would be the basis for such a statement? What does this imply with respect to the future development of educational psychology? Why have biological and physical scientists been able to advance more rapidly than behavioral scientists?
4. What kinds of factors or problems might make it difficult for a teacher to play the role of a behavioral scientist (and "educational psychologist" in his own right) in his classroom?

SUGGESTED READINGS

- Dewey, J., *The sources of a science of education*. New York: Liveright, 1929.
Goodlad, J. I., ed., *The changing American school*, 65th Yearbook of the National

Educational Psychology in the Classroom

Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1966. See chapters on the teacher's changing role, guidance, and behavioral sciences and the schools.

Ripple, R. E., ed., *Readings in learning and human abilities*. New York: Harper and Row, 1964. The introductory section raises some interesting questions regarding the contribution of educational psychology to the understanding of educational processes.

Ryans, D. G., Educational psychology. In C. P. Stone and Q. McNemar, eds., *Annual review of psychology*, Vol. 6. Stanford: Annual Reviews, 1955. Contains a review of how the subject matter of educational psychology has changed in the last forty years. Many of the *Annual reviews of psychology* also contain a section reviewing recent research in educational psychology and discussing some of the trends in the field.

Van Dalen, D. B., *Understanding educational research*. New York: McGraw-Hill, 1962. The first chapter, entitled "Social progress and research," delves into the more scientific aspects of educational psychology.

Watson, R. I., A brief history of educational psychology. *The Psychological Record*, 1961, 11:209-242.

The following journals contain material pertinent to this chapter, as well as to the field of educational psychology in general: *California Journal of Educational Research*, *Harvard Educational Review*, *Journal of Educational Psychology*, *Journal of Educational Research*, *Journal of Experimental Education*, *Review of Educational Research*, *School and Society*.

2 Why Learners Behave as They Do



Audio-Visual Services, Alameda County Schools

As teachers carry out the various tasks of their professional role, their chief concern is that of promoting, stimulating, and guiding learning. The fact that teachers are preoccupied with learning does not necessarily mean that learning ought to be or even can be understood as a process apart from the learner, even though we may for various reasons study or analyze one or more aspects of learning, purposely ignoring, for the moment, other aspects of the learner and his behavior. At various points further along in this book, we shall in fact focus our attention on the learning process, but in this chapter, as well as the five that follow, we shall be considering the "background" of learning: those characteristics of the learner and his environment which affect the amount and kind of learning that will take place and that determine indeed whether students will learn at all. In this chapter we are especially concerned with various aspects of the motivational forces that help explain why people behave as they do. A teacher's effectiveness is, generally speaking, proportionate to his understanding of the motivation of the learners he supervises. It is this motivation that provides force and direction to the behavior they display, whether this behavior be the kind of learning the teacher is trying to foster or something less desirable.

Internal and External Forces. One way to look at behavior is to view it as the product of forces: forces "inside" the individual and forces "outside" the individual. Sometimes the individual is figuratively or literally pushed by external conditions into performing a given action; sometimes there is a feeling within him that impels him; but most likely whatever he does is the result of the reciprocal interplay and interaction of many forces, both external and internal. By "inside forces" we mean needs, wants, anxieties, energy, interests, attitudes, feelings of guilt, and so forth. By "outside forces" we mean the attractive or the disturbing aspects of the situation in which the individual finds himself, the attitudes and expectations of others, rewards,

dangers, threats, and so forth. It is ordinarily very difficult to determine where an internal pressure leaves off and an external one begins, and the differences between internal and external forces may not be very sharp or precise. For instance, Miss Everett may tell Dora Smiley to pay attention, that first-graders do not whisper when the teacher is talking. Dora stops whispering and listens, paying close attention to what Miss Everett is saying. Dora does this partly in response to external forces: the request of the teacher, the teacher's expectation that her command will be obeyed, the fact that other children are looking at her, the psychological atmosphere of the classroom, and so on. But this bit of behavior also results from forces within Dora: her respect for authority, her desire to please Miss Everett, her ambition to be a well-behaved first-grader, and her unwillingness to suffer embarrassment. To some extent these internal forces are the mirror images of external ones. Miss Everett's desire to be obeyed is mirrored in Dora's desire to obey her. The idea that teachers are entitled to respectful attention is both an internal and an external force. It is a concept or generalized feeling that is a part of the school situation, and Dora is incorporating it into her own set of values.

Although trying to distinguish between internal and external forces introduces what may seem like a note of artificiality into our attempts to understand the learner's behavior, it is very often helpful to make such distinctions in the interest of better understanding. Any behavioral act has a completeness all its own, but we can often get a better understanding of it if we split it up into sections or layers, so to speak, just as engineering students can gain a better understanding of the operation of an automobile engine by studying cross-sectional drawings. In this chapter and the one that follows we examine those forces and conditions that are largely internal in character, in Chapters 4 and 5 we consider forces and conditions that are largely external, and in Chapter 6 we take up a number of the ways in which we respond to internal tensions and external demands.

The Attainment of Competence and Adequacy. There are many approaches to analyzing and classifying the various internal forces that produce behavior. Laboratory psychologists usually prefer systems that explain behavior in terms of what are termed "primary drives"—motives that are largely physiological in nature, such as hunger, thirst, sleep, sex, and so forth. In recent years, however, an increasing degree of dissatisfaction has developed among psychologists regarding this formulation. Although a great deal of animal behavior and some aspects of human behavior can be explained in terms of primary drives, there is a much larger part of behavior that cannot be easily explained in such terms. For example, the eagerness of animals to engage in activity apparently for its own sake, irrespective of any readily

identifiable physical need, raises a question as to the usefulness of primary drives as the sole basis for explaining behavior. And attempts made to explain on a purely physiological basis the infinite range of socialized or symbolic behavior displayed by the human organism make little real sense to the teacher or any other professional person who is concerned with human behavior, and hence are of limited usefulness.

What is needed, then, is a way of looking at human behavior that goes beyond mere physiology and promises to provide a basis for a more effective understanding of behavior—more effective, that is, than the understanding most of us have developed as a result of everyday interaction with one another. One of the more promising systems of analyzing and describing motivation is that devised by Robert W. White (1959) of Harvard University. After an intensive review of psychological research and theory in the field of motivation, White came to the conclusion that behavior other than that encompassed in the primary drives—in other words, behavior consisting of exploring, investigating, communicating, thinking, attending and perceiving, manipulating the environment—could be considered as attempts to attain *competence*. This striving toward competence he termed *effectance*, a process resulting in a feeling of efficacy or effectiveness. The need for competence or effectiveness, operating relatively independently of the physical drives, according to White, enables the human organism to find ways of adapting itself to an immensely complex environment. It is this need for effectiveness that accounts for most of the learning accomplished by the human organism, inside or outside of the classroom.

A similar conclusion has been reached by Arthur W. Combs and Donald Snygg (1959) as a result of research in the fields of psychotherapy and learning. Combs and Snygg propose that man's basic need is "a need for adequacy," which they describe as a "great driving, striving force in each of us by which we are continually seeking to make ourselves ever more adequate to cope with life." The need for adequacy has two aspects: maintenance and enhancement. From birth to death, man's need to maintain himself is the most important task of existence. But maintenance involves more than mere survival; it is more than merely satisfying primary drives on a here-and-now basis. Man is a continually changing individual living in a continually changing world, and if he is to maintain any kind of continuity and psychological integrity, he cannot resign himself to an existence as a passive participant in the changes that are a part of everyday life. Man, more than any other animal, is able to anticipate future events, and this anticipation leads him to making changes in himself and his environment in order not only to maintain himself in his present situation, but also to *enhance* himself and

his possibilities in such a way that he will be able to maintain himself in the future and will thus feel a certain degree of security in being able to do so. Fred Stark is currently getting B grades in biology, but is concerned about next week's examination. He applies himself to his studies in order to enhance his chances of getting a good grade, because he would like to maintain himself at his present level of scholarship.

"Need" Defined. Before we continue with our discussion of the forces that produce behavior, it may be well to explain that the term "need," as used in this book, refers to a condition experienced by the individual and not to a condition attributed to the individual by others, however well-intentioned they may be. Needs experienced by an individual are "psychological needs," whereas needs attributed to him by others are "normative needs," to use a term that appears in the writings of Herbert F. Wright (1943). It is important to make the distinction between psychological and normative needs, because teachers are inclined to confuse the two with one another. To say, for example, that a child needs "rewarding social contacts" is to recognize a universal psychological need to obtain satisfactions from relationships with others. But to say that a child needs "an understanding of the elements of algebra" is to refer to the expectations, standards, or norms (hence the term "normative needs") that adults have developed on his behalf. A child has no choice but to respond in some way to his psychological needs; they are a dimension or aspect of the psychological factors that motivate his behavior. On the other hand, he may or may not respond to the normative needs that adults have prescribed for him. As Wright puts it, "psychological needs become charged, as normative needs never do, with motive power."

Basic Needs. During infancy and the early years of childhood, behavior is dominated by an active concern or even a preoccupation with physiological processes—with what might be called "maintenance needs." The newborn infant is upset when his primary drives for food, sleep, agreeable skin temperature, and the like encounter interference. Conversely, he is relaxed and happy when they are met. Within a year or two, however, he has developed needs concerned with enhancement. He doesn't want the plain red ball that he has; he wants the fancier ball that the other baby has. He flies into a rage when his mother takes one of his brothers on her lap to comfort him. He may have been happily playing with his toy automobile, but the sight of Brother on Mother's lap causes him to throw a tantrum. That lap belongs to *him*; *he* has first call on his mother's attention! His status has been debased, and he wants it reenanced immediately.

The need to which this baby is reacting has nothing to do with physical

maintenance. According to everyday common sense, he should be happy and contented. He has been fed; his clothing is dry; he is not tired; he has every reason to be physically comfortable; he even has a toy to play with. Yet anyone seeing his face contorted with rage and hearing his ear-splitting squeals would have to admit that something is obviously lacking in his life. That something is *attention*, or, to use a word commonly applied to this need: *love*.

There is a considerable body of research to show that the need for attention or love is essential in normal human development. Some psychological workers, like René Spitz (1945, 1946), claim that if the need for love is not met adequately, children may even lose the will to live. Other researchers, like Wayne Dennis (1960), maintain that a lack of attention is necessary to the extent that it offers children an opportunity to learn the behavior that is normal for their age. We explore this somewhat controversial subject more fully in the next chapter, but suffice it to say for the moment that the need for attention or love is one that must be met to some degree if children are to develop normally.

The need for attention or love appears at times as a need for maintenance and at other times as a need for enhancement. A child who turns to his mother for reassurance and emotional support is looking for some form of attention that will restore his self-confidence—a maintenance need. But if he satisfies this need, he also enhances his ability to cope with the pressures of his social and physical environment.

There are other needs that have dimensions of both maintenance and enhancement. As children enter the middle years of childhood, they start the long process of growing away from the home and becoming a part of the larger community. They begin to seek the company of children their own age and to discover the joys and sorrows of life in the "peer group." The "need to belong" begins to have particular significance. They learn to think of themselves as members of a family, a classroom group, a gang, a Scout troop, a church, and a community. Membership in such groups enhances the self: an individual is more competent and effective if he feels he "really belongs" and if he is able to function as a group member. This newly acquired concept of himself as a socially adequate person is maintained by experiences that demonstrate his degree of acceptance by the group. Perhaps the act of becoming a functioning member of one or more groups outside the home is, initially at least, more of an enhancement need than a maintenance one, but once established, it becomes a need that requires frequent and recurring satisfaction: a maintenance need.

Another need that is even more obviously related to enhancement is what

Educational Psychology in the Classroom

A. H. Maslow (1954) calls the need for "self-actualization": the need to find ever-more-adequate means for self-expression, to realize one's potentialities, to develop greater degrees of effectiveness and competence, to be creative, to develop roles in life that are satisfying and worthwhile. It is in this need that the "growing edge" of the individual personality is invested. If this need is alternately stimulated and satisfied, continual learning and growth take place. If it is never stimulated or never satisfied, the individual's psychological development tends to remain static.

The need to belong and the need for self-actualization are in some respects similar to what Henry A. Murray (1938) calls the "need for affiliation," commonly designated as "n Aff," and the "need for achievement," commonly designated as "n Ach." N Aff is the basis for a great deal of behavior that is concerned with such forms of behavior as friendship, cooperation, and socialization in general, whereas n Ach is the basis for ambition, self-improvement, and some forms of competitiveness. Both needs have been



Chaim Lieberman

The need for attention or love must be satisfied if children are to develop healthy personalities. The need to express love is also important for the mental health of adults.



"But why should I apply myself more? I'm very popular with the other kids just the way I am."

The Wall Street Journal. (Reproduced by permission.)

Needs for achievement (n Ach) and needs for affiliation (n Aff) are often in conflict.

the subject of a great deal of research in recent years, and we shall be referring to them again at various points in this book. Both needs are of vital concern to educators, partly because they become prominent during the school years and partly because they trigger drives which may lead to cooperation, school achievement, and other teacher-approved behavior, but which may also lead to behavior that works at cross-purposes with teachers' objectives and values.

The behavior that is characteristic of each of the various subvarieties of the needs we have described grows increasingly complex as we follow their development from the first to the fourth level, using the scheme presented in Figure 2-1. Behavior that is related to needs at the lower, more physiological level tends to be simple, and oriented to single, well-defined goals; behavior that satisfies needs at the upper, more socialized level tends to be symbolic or abstract, and oriented to complex arrangements of goals. The

Basic (or Normal) Needs	Characteristics	Results of Frustration (or Anticipated Frustration) of Basic Needs
<ol style="list-style-type: none"> Needs concerned with bodily processes and the maintenance or defense of the human organism. Needs for attention and love. Needs to belong (including the need for affiliation, or n Aff). Needs for self-actualization, self-expression, creativity, and feelings of general adequacy and competence (including the need for achievement, or n Ach). 	<p>Primarily concerned with maintenance or defense, relatively simple, and individual-centered.</p> <p>↑</p> <p>↓</p> <p>Primarily concerned with enhancement, relatively complex, abstract, and other-centered.</p>	<p>Fear or anger.</p> <p>↑</p> <p>↓</p> <p>Anxiety.</p>

FIGURE 2-1. A developmental system of behavior.

need for oxygen can be satisfied only by breathing air containing oxygen, but the need for creativity may be satisfied by helping another person solve a difficult problem, learning a new skill, or repairing a leaky faucet.

Needs at the upper, more socialized end of the scale make greater demands on the maturity and intelligence of individuals. Getting and keeping a job is a far more complex form of behavior than comforting an unhappy child or falling asleep, although in our fast-moving culture it sometimes happens that we are able to learn the more complex skills that are necessary for job-getting and job-holding but "forget" some of the simpler ones—how to give and receive love, or even how to fall asleep at night. Sometimes frustrations at the more abstract, socialized levels interfere with our ability to meet needs at the more rudimentary levels. For example, it is not unusual for people who are having difficulty in maintaining satisfactory relations with others to encounter difficulty with processes of digestion or elimination. The reverse can also occur. Students who are preoccupied with problems of making and keeping friends and becoming accepted as members of a group (n Aff) may have difficulty in becoming involved in the kind of intellectual activity that would improve their academic status (n Ach). Such problems and dilemmas show how our inability to meet needs at one level limits our ability to meet needs at other levels, and how the various levels of needs we

have described are actually different aspects of the overriding basic human need to become adequate and competent.

The Effects of Anxiety on Behavior. The psychological needs that we have been describing may serve as the basis for understanding a great deal of human behavior, particularly those kinds of behavior that are in our own best interests. But much behavior that we observe in others (as well as in ourselves, to be honest) is obviously not in our best interests and cannot easily be accounted for by needs to become competent or adequate. Here are two examples:

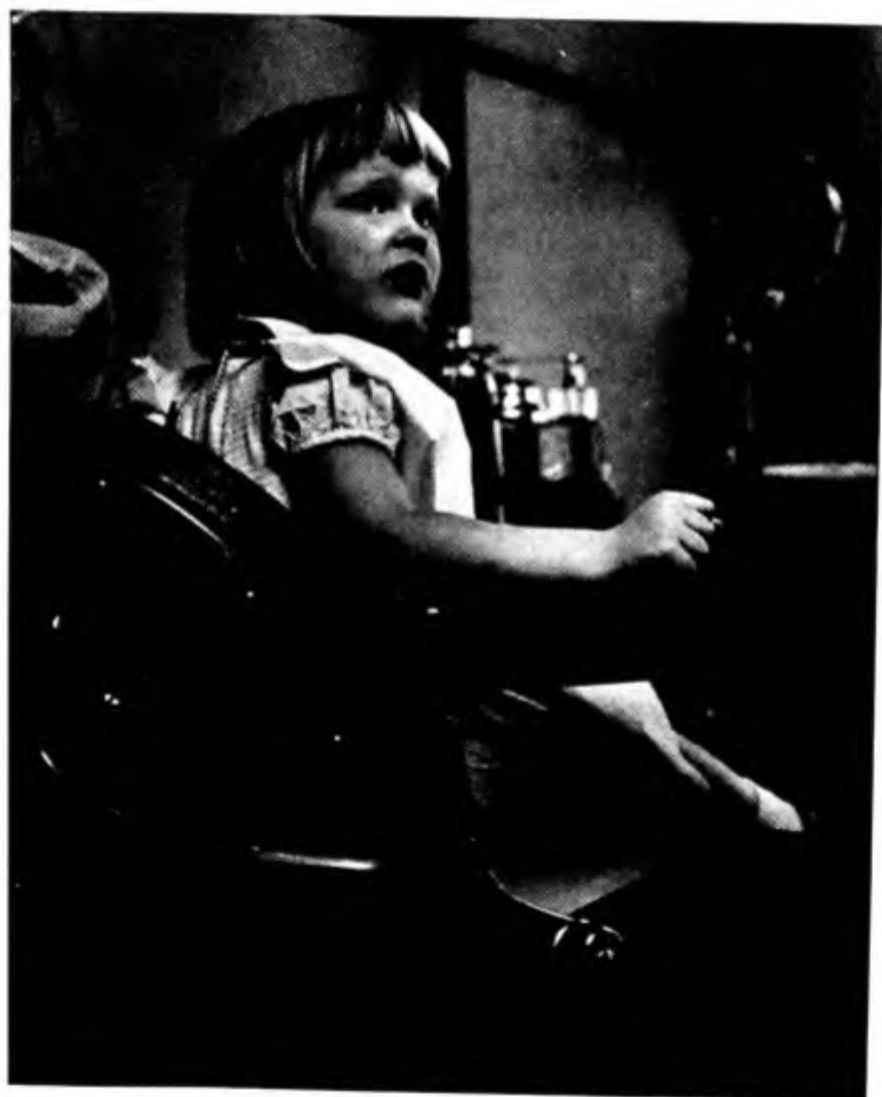
Howard teases George whenever they are together. George is bigger than Howard and he does not tolerate being teased. Every time Howard teases him, George pummels him unmercifully until someone separates them. This goes on day after day. It is plainly not in Howard's best interests to tease George and be beaten by him. Why, then, does he do it?

Lucy has the intelligence to get good marks—an IQ of 130—but her grades are below average. She is what educational psychologists call "an underachiever." Her parents and teacher are concerned about her inability to get grades consistent with their expectations for her, and Lucy herself is quite worried. Although she tries to do better, she always manages to sabotage her own efforts. It is against Lucy's best interests to get poor grades, just as it is against Howard's interests to pick a fight with a bigger boy. Why don't Howard and Lucy act sensibly? And why don't they respond to psychological needs for competence and adequacy?

Explaining the behavior of two individuals like Howard and Lucy would take a great deal of time and effort on the part of a person with special psychological training, but we can nevertheless come to a general conclusion about most forms of behavior that are obviously not in the best interests of the individuals concerned—that is, such behavior is motivated by, or is an attempt to cope with, a considerable degree of anxiety.

Although the term "anxiety" takes on different shades of meaning as it appears in the writing and research of psychologists in various fields of specialization, there is general agreement that it refers to a complex and sometimes chronic emotional state generally characterized by fear, apprehension, or tension. As such, it is associated with failure to meet our needs, anticipation of such failure, or even merely an awareness of the possibility of failure. We have therefore included it in Figure 2-1 on the "frustration" side of the diagram. As Figure 2-1 shows, the frustration or anticipated frustration of basic, normal needs results in emotional disturbances that take the form of fear, anger, or anxiety. The more we are concerned with our vital or biological needs, the more likely we are to experience and display fear or anger, whereas the more we are concerned with our ability to function on a social-

ized or intellectualized level, the more likely we are to experience some form of anxiety or tension. Fear and anger are "primitive" emotions; they are the spontaneous and sometimes dramatic accompaniment to situations involving (1) immediate or present danger to ourselves or (2) some direct and drastic interference with ongoing behavior. But frustrations that threaten needs at more abstract and socialized levels are likely to be of a more subtle, indirect nature. Not only are they harder to identify, but they also involve behavior that is highly complex, behavior that is a part of the intricate web of our relations with others. Perhaps we feel irritated when someone in authority accuses us of carelessness, but our anxiety about our status leads us to swallow



Berni Schoenfield

Fear and anxiety are related emotions. The more the disturbance is related to a physical need or a threat to the physical self, the more it assumes the quality of fear. The more the disturbance involves interpersonal relations, the more it takes on the quality of anxiety.

our anger. Or perhaps we feel that we are being left out of plans being made by our group but are really not sure and would feel silly bringing it up. Hence we feel awkward and insecure in our relations with the group; we have a feeling of emptiness whenever we think about the problem. It is a bothersome, elusive feeling, and it will not go away.

This is the quality of anxiety. It is elusive, bothersome, and hard to identify. It commonly develops within the context of face-to-face relations with others—what psychologists call “interpersonal relations.” In its most intense form, it can be quite painful—so painful that we are usually willing to go to great lengths to avoid it. Because anxiety is so painful, we sometimes do things that are not in our best interest in order to avoid or reduce anxiety. We do not know what the source of Howard’s anxiety is, but it appears to be so strong that he is willing to suffer physical pain in preference to the pain of anxiety. For her part, Lucy is willing to suffer the disgrace of poor marks rather than face and deal directly with her anxieties.

Origins of Anxiety. The observations of Harry Stack Sullivan (1947), the great psychiatrist and teacher, led him to the conviction that the initial experiences with anxiety occur in infancy, when infants sense displeasure or emotional upset in their parents, particularly their mothers. Sullivan noted that infants displayed such symptoms as restlessness, irritability, and feeding problems when their mothers were displeased or disappointed, or even when their mothers were troubled by events that had nothing to do with the child. So close is the emotional linkage between mother and infant, according to Sullivan, that negative feelings on the part of the mother are likely to disturb the infant’s sense of security, that is, his need to be loved and to feel secure in his mother’s love. This feeling of insecurity and psychological isolation from the mother is what Sullivan terms “anxiety.” (It is understood, of course, that negative feelings and anxiety occur in the best-ordered households and are part of the normal process of human interaction. It would be as undesirable to shelter a child from all negative feelings as it would be to overexpose him to such feelings.)

The anxiety we first experience as infants continues to have an effect on our behavior throughout life. It appears whenever others criticize, snub, or disapprove of us—whenever we are “rejected.” The more important the rejecting individual is to us, and the more power he has, the greater our anxiety. Our own behavior can arouse anxiety as well, whenever we find ourselves behaving in ways that are inconsistent with the concept we have of ourselves. Situations that are ambiguous or confusing may also arouse anxiety. The future is a major source of anxiety because of its uncertainty. Hence we

lay plans and take precautions to make the future somewhat more predictable and thus allay our anxieties to some degree.

According to Camilla M. Anderson (1950), a psychiatrist who has developed a theory of human behavior similar to Sullivan's, *all* human behavior is based on the avoidance of anxiety. "Everything one does, every choice one makes, every reaction one gives, every item and detail of one's behavior is calculated to forestall anxiety or to deal with it if it arises."

Although we have stressed the unpleasant features of anxiety, there is no question that it has positive values. Our wish to avoid anxiety is a major factor in our learning to be careful and considerate in our relations with others, to conform to the laws and customs of society, and to provide for the future. Anxiety that enables us to behave like civilized individuals in a civilized society is what we shall call "normal anxiety." A certain degree of normal anxiety is therefore necessary as a kind of goad or stimulus to keep us at the task of becoming more adequate. But an overabundance of anxiety distracts us from the positive direction of development, and leads us to develop forms of behavior concerned solely with the avoidance or reduction of anxiety. Hence the appearance of behavior that is not in our best interests. It should be clear, then, that our basic need to become competent and adequate and our tendencies to develop varying degrees of anxiety are both likely to have a significant effect on learning. We shall have more to say about their effects in Chapter 9.

Responsiveness to Reinforcement. Each of us is apparently organized in such a way that we are likely to respond positively to any situation that will enable us to maintain and enhance ourselves—unless, of course, we are preoccupied with dealing with the frustration or threatened frustration of some need. In other words, under ordinary, nondisturbed conditions we are likely to modify our behavior in order to gain more satisfactions and avoid disturbing, frustrating experiences. Because much of the satisfaction that we obtain comes from our interaction with our physical and social environment, it follows that the environment has the power to shape our behavior to a considerable degree. The environment may be thought of as presenting an infinite array of stimuli, to which we, in turn, are able to react with an infinite array of responses. Certain stimuli are naturally going to be more significant than others, because they are more obviously related to the satisfaction and frustration of our needs. Likewise, certain responses are more likely to appear, because they, too, are more appropriate to the stimuli that can satisfy our needs. As we respond to certain stimuli with responses that are satisfying, the responses in question become rewarded, strengthened, or *reinforced*, to use the appropriate psychological term.

Let us take as an example the experience of a first-grader learning the sequence of numbers. The teacher asks him to count from one to ten. He complies readily, having learned to count before he entered school. But when the teacher asks him what number comes immediately after seven, he hesitates and asks, "Nine?" The teacher says, "No, count from one to seven and then tell me what comes next." This time he gets the answer and is reinforced by his pleasure in being right, as well as by the teacher's approval. As the lesson continues, some of his responses are right, and some are wrong. However, only the correct responses are reinforced by the teacher's saying, "That's right." Gradually, he learns to avoid the incorrect responses and to think through the sequence of numbers before giving his answer.

Learning consists of the changes in behavior that result from interaction with the environment, and reinforcement is the basic event that makes learning possible. Inasmuch as the more active part of our environment consists of other people, it is clear that a great deal of our learning results from the extent to which others reinforce our responses. We can, of course, become our own reinforcers, and this is what often happens when we work on a task purely for the pleasure we get out of doing it. This latter kind of learning figures largely in satisfying needs for self-actualization and achievement. But most of the behavior that characterizes us as individuals in a society—that makes us the persons we are—is the product of social learning, which is the result, in turn, of the amount and kind of reinforcement our behavior has received from the significant persons around us. The most crucial periods for social learning are infancy and early childhood, and we will have more to say about this process in the following chapters when we take up the theories proposed by Bandura and Walters (1963).

The Need for Stimulation. If our ability to obtain satisfaction depends on the presence of the proper stimuli, it follows that we are apt to prefer the kinds of settings that are more likely to provide those stimuli. Therefore, in a very general way, environments that are rich in stimuli—that are stimulating—are more attractive than those that are poor in stimuli. We might rephrase this to say that interesting or exciting environments become preferred over those that are monotonous and dull.

Some recent research suggests that stimulating environments have positive value for animals, as well as for man. Animals that are handled by experimenters at frequent intervals during the weeks after birth develop more rapidly, are more curious, and are better at solving problems than animals who do not receive this treatment (Meier, 1961; Ehrlich, 1959; Spence and Maher, 1962; Wilson, Warren, and Abbott, 1966). Furthermore, rats that spend weeks prior to maturity in an environment that has a variety

of stimulating objects not only are superior at solving maze problems but actually develop a thicker cerebral cortex (the "thinking" part of the brain), as contrasted with rats raised under normal laboratory conditions (Bennett et al., 1964).

Because of recent attention to the plight of children raised in environments that have been described as "poor," "culturally deprived," or "socially disadvantaged," studies of the early stimulation of animals have taken on added interest, for such studies suggest that increases in the degree and variety of stimulation may have an effect on the intellectual and social development of children and youth.

Genetic Aspects of Behavior. In contradistinction to those aspects of behavior that are learned are those that are the result of inherited tendencies. Psychologists limit the term "inherited characteristics" to those that are biologically transmitted by parents. Inherited characteristics unquestionably have some effect on an individual's appearance—his height, the color of his eyes and hair, the shape of his feet and hands, and the like. Some of the characteristics that we inherit are universal in the human race, such as the structure and functioning of the digestive tract, the nervous system, and so forth. However, most of these characteristics can be modified to some degree by environmental forces. For example, Americans of this generation are taller than their parents, irrespective of their racial stock (Wilson, 1948), and American girls enter the menstrual cycle earlier than do girls of certain other countries (Franzblau, 1935). Some phenomena that appear to be entirely physiological, such as the tendency to develop duodenal ulcers, are evidently related to the individual's social environment (Ruesch, 1953).

What we are saying is that we cannot tell as yet how much of human behavior is predetermined by inherited traits or tendencies. Often, when we think we have identified a characteristic or pattern of behavior that appears to be inherited, we also find evidence that it may also be related to a certain social culture or a kind of personality. Furthermore, it is very likely that many of the factors that we commonly think of as being inherited are actually transmitted through *social* inheritance, rather than through *biological* inheritance.

For example, we say: "Philip King gets that temper from his father. The Kings always have been quick-tempered people." In all probability, Philip learned a quick-tempered way of behaving by imitating his father and the other members of his family. It is possible, of course, that Philip was irritable from birth—even newborn babies differ in temperament. But whether the newborn irritable Philip becomes or remains a quick-tempered child will depend on the kind of reinforcing experiences he has. In other words, it will depend on what kinds of behavior his family encourages or discourages.

Although children's behavior is highly modifiable, we recognize the fact that there are genetically determined trends that have a significant effect and are persistent. Some consistencies in behavior appear even before birth. The rapidity with which twenty-five infants mastered certain developmental problems of behavior during the first few months of life was found by C. Etta Walters (1965) to be related to the amount of activity they had shown during their last three prenatal months. Early activity levels give important clues to the kinds of persons that infants eventually become. But how this activity is received by families and by the society into which a child is born is equally and perhaps even more significant. Clyde Kluckhohn (1949) reported, as a result of observing the development of Zuñi and white infants, that the Indian culture had the effect of lowering the level of activity in children. White babies that appeared hyperactive at birth maintained this level of activity at two years of age, but the Zuñi babies did not.

In addition to cultural patterns, there are other combinations of social forces that shape the behavior of individuals. For example, being a first-born child tends to have a noticeable effect on personality and behavior. First-born slum children, for example, seem to have fewer psychological problems than later-born children in the same families (Dohrenwend and Dohrenwend, 1966). Adolescents who were first-born children are apparently more dependent on others for social support, as contrasted with those who were later-born children (Becker, Lerner, and Carroll, 1964). First-born children are more likely to enter college (Altus, 1965) and as infants are inclined to score higher on mental tests (Bayley, 1965). Parents interviewed in a study reported by Allison Davis and Robert J. Havighurst (1947) stated that their first-born children were more inclined to be selfish and self-centered. When Helen L. Koch (1955) asked teachers to rate five- and six-year-old children on a number of behavioral characteristics, she found that those who were first-born were described by their teachers as more intense emotionally, more upset by defeat, showing more anger, and more inclined to offer alibis.

Very possibly all these characteristics—the greater achievement as well as the personality differences—are related to the fact that the first-born child gets more attention during the first months and years of life than do the other children. The first-born child has the experience of giving up the monopoly of parental attention that he has enjoyed and sharing it with his next-born sibling. The culture also enters the picture, because the first-born child in our society is expected to play certain roles, such as taking care of brothers and sisters in the absence of the parents. All of these factors have an effect on first-born children and cause them to develop in ways that are somewhat different from later-born children.

The fact that environmental factors play such a significant part in determining the kinds of people we become does not mean that the relationship between environment and behavior is either simple or obvious. In fact, it is all too easy to make overgeneralizations based on environmental data. Here is a man who is a coal miner. He says that he never had a chance to get ahead in life because his family was so poor that he had to go to work in the mines before he was out of the sixth grade. But here is another man, a successful lawyer in the same town. He explains his success by saying that the poverty he experienced as a child made him determined to go to school so that his children would not have to put up with the same living conditions. One man says that he is a failure *because* of his childhood environment; another man ascribes equal importance to his childhood environment but says that he succeeded *in spite of it*.

The Importance of Perceptual Factors. It appears, then, that the conditions under which children grow up are not as important in determining their behavior as the way in which they react to or see these conditions. An individual may be a completely inadequate parent as far as society is concerned. He may be a criminal psychopath who ruthlessly exploits his children. But if his children see him as a parent who loves them, they will vigorously resist and resent any attempts of the authorities to interfere with their relationship, even if the proposed change means putting them in the home of a family who will give them excellent care and who will really love them. A certain teacher may be a kind and generous person, but if a child regards her as an enemy, he will react to her and behave toward her just as he would toward an enemy. It is always important to remember that a child reacts to situations and people in terms of his *own* perceptions and points of view, not in terms of the points of view held by adults, and not necessarily in terms of the points of view of other children.

The "Self." The pattern of perceptions developed by the individual as he grows from infancy to childhood and maturity is what some psychologists call the "self-structure." The world appears as a confused mass of impressions to the newborn infant. He is even unaware of his physical dimensions—of where *he* leaves off and where the *world* begins. Watch a baby discovering and rediscovering the important fact that his hands and feet are really a part of himself and not playthings that someone has left lying around.

During the early years of childhood, the child begins to make differentiations out of the blur of impressions that is his world. As Carl Rogers (1951) puts it, "a portion of the total perceptual field gradually becomes differentiated as the self." Not only does the child begin to see himself as a person somehow separate from the rest of the world and from other people,

but he learns to recognize and identify familiar faces, sounds, objects, and events. As he grows old enough to play with other children, he finds that certain things belong to them and certain things belong to him. In a way, the things that belong to him are a part of him, and when anyone tries to take them away, he both feels and behaves as though someone is trying to amputate a limb. He has similar feelings about the people who love and care for him. They, too, are a part of him—a psychological part of him, which is why he is disturbed when they are disturbed or why he is disconsolate if they leave him for long periods of time. As the child grows to adolescence and adulthood, he normally becomes less dependent on other individuals and less personally attached to possessions and other things in his physical environment. In other words, persons and things become less and less a part of him, because he has learned to differentiate between what *belongs* to him and what is physically and actually a *part* of him. Neverthe-



Zora Castagnoli

An important part of growing up is learning to identify with and take on the values of significant adults. The position held by the teacher enables students to use her as a model for behavior, particularly when she is easily accessible and shows warmth, interest, and positive concern toward children.



Audio-Visual Services, Alameda County Schools

Developing a self-concept is accompanied by a growing awareness of oneself as a member of groups. Participating in the school orchestra not only gives students a chance to participate in satisfying group activity, but also contributes to their sense of identity.

less, even a mature adult has a wide circle of persons, situations, creations, and possessions in which he has invested some of himself and in which he is personally involved. To some extent, they form a part of his psychological self.

The "Self-Concept." Arthur W. Combs and Donald Snygg (1959) have developed a useful method for studying the interrelationship of various aspects of the self-structure. They call the individual's perception or view of himself his *self-concept*, the part of the environment in which he is involved or has a psychological or emotional investment his *phenomenal self*, and the rest of the environment of which he is aware or to which he responds his *phenomenal environment*. (We shall use the term "perceived" instead of "phenomenal" inasmuch as it seems somewhat clearer and less technical.)

The self-concept is what the individual thinks of as his actual self—the part that is "really me." The perceived self, as Figure 2-2 shows, *includes* not only the self-concept but also those aspects of the environment that an individual *identifies* with himself—"my family," "my school," "my country,"

and so forth. Both the self-concept and the perceived self are in turn included within the perceived environment or the "phenomenal field," as Combs and Snygg call it. Other psychologists refer to it as the individual's "personal field," his "behavioral field," his "psychological field," or his "life space." Perhaps a good everyday term for it would be his "private world." Therefore, to sum up what we have been saying about the process of development, the confused blur of sensations experienced by the infant becomes differentiated during the childhood years into a private world (or self-structure) consisting of himself (his self-concept); the things, events, and people with which he is personally involved (his perceived self); and the world as he sees it (his perceived environment).

"Reality" Is How We Perceive It. We introduced this discussion of perceptual factors in behavior by saying that children react to situations and people in terms of their own perceptions and points of view, as contrasted with the perceptions and points of view of adults. The phenomenal field or private world of an individual is *reality*, as far as he is concerned. In other words, we all tend to react to the world that *we* perceive, not the world as perceived by others, and the way in which we perceive the world is for us "reality." What we perceive and the way in which we perceive it are governed or conditioned by our psychological needs. This helps to explain why

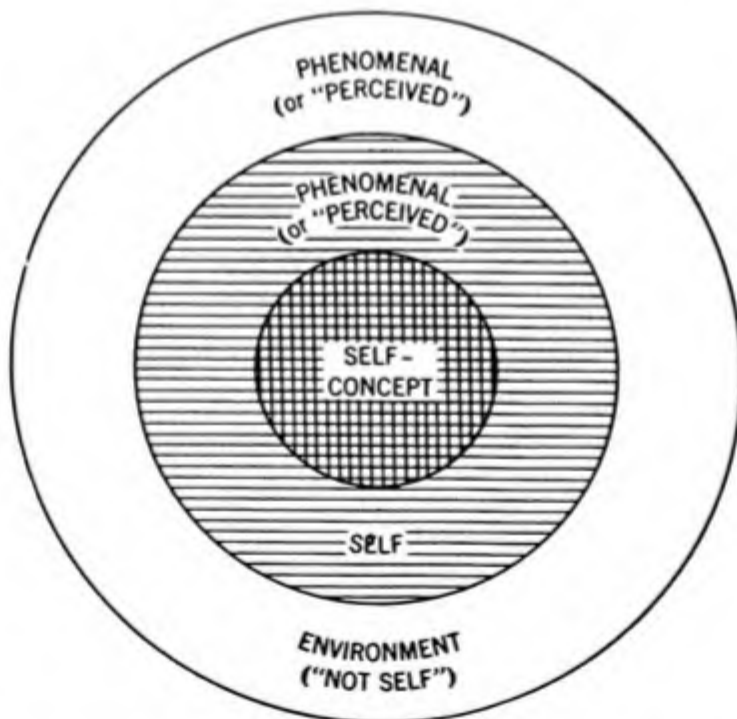


FIGURE 2-2. Diagrammatic concept of the "self-structure." (Combs and Snygg, 1959.)

the children of inadequate parents, mentioned a few pages back, so often resist attempts to place them in more adequate homes. These children have a strong, and to a large degree unmet, need to be loved. The strength of this need leads them to overvalue the little attention they get from their parents. Thus we should not be critical if they overrate the little love they get, because it is all they have. These children do not see being transferred to a better home as an opportunity to get more love and attention. Rather, they see it as an attempt to separate them from the only love they have ever known. Hence they are likely to resist any attempts to change their status. They simply do not see the facts that are obvious to any objective adult: that their own parents are treating them very shabbily and that their new parents will give them the love and care they need. The adults cannot understand this because they are viewing the whole situation in terms of their broader experience, in terms of *their* perceived environment and not in terms of the environment as perceived by the children. We should add, in passing, that such children can be helped by skilled psychotherapists to develop and reorganize their private worlds along more realistic lines, but any such attempts must take into account the gap between the world as they see it and the world as viewed by adults.

Perceptions Change with Maturity. As children grow to maturity, their perceptions of self and environment change. As these changes take place, their behavior is modified accordingly. Sometimes changes do not take place as rapidly as would be desirable, whereupon maladjustments are likely to occur.

Simone was upset and unhappy the first day at kindergarten. She had looked forward to school as a pleasant and exciting experience, but instead she was confused, depressed, and anxious. During the first few days, she stayed very close to the teacher, refused to participate in the games and activities, and spent most of the time sucking her thumb, something she had not done since she was three. By the beginning of the second week, however, she began to respond to the teacher's suggestions that she might like to play house with some of the other little girls, and after a few more days she was enjoying kindergarten as much as any other child.

One way to interpret Simone's behavior is to say that she had some initial difficulty in developing a concept of herself as a pupil in kindergarten. It took her a few days to organize her concept of the new environment and to determine where she fit in. She stayed close to her teacher, just as she would have stayed close to her mother in a similar confusing situation. Perhaps she was afraid of what might happen to her, afraid of unknown dangers.

However, once she developed an adequate concept of herself as a member of a group of kindergarteners and had satisfied herself that the situation was no more dangerous than her own home, she felt free to modify and adjust her behavior according to a more appropriate and more mature pattern. As long as she perceived school as a threatening situation, she behaved in an immature and anxious fashion, but when she was able to develop a picture of the situation that was closer to objective reality, she was able to behave more realistically and with greater confidence. Simone's teacher wisely refrained from putting too much pressure on her to participate actively with the other children, because she knew that children often have difficulties during the first days of school. Furthermore, any attempts to tell Simone that she was foolish or naughty might have aroused even greater anxiety.

The point is that the behavior of children is determined by their perception of themselves and of the world around them. As this perception changes, their behavior changes accordingly. As much as they might like to do so, teachers cannot *give* concepts directly to children, by insisting, for instance, that they become more mature and realistic in their attitudes. Usually such direct approaches serve only to strengthen the immature attitudes that are interfering with the development of more realistic concepts and consequent behavior. Sometimes adults, who are in a hurry and who want to get on with the business of educating, find children's resistance to change a source of difficulty and annoyance. Such adults are themselves at fault in the sense that they are unable to modify *their* private worlds to accommodate the idea that children's concepts of life may be different from those of adults and that such concepts predetermine children's behavior. In fact, this tendency of adults to force certain kinds of behavior on children and to maintain *their* private worlds at the expense of the private worlds of children underlies much of the tension, irritability, and anxiety found in classrooms today. It results in unhappiness and frustration for everyone involved: for teachers, parents, administrators, but most particularly for children. Much of this unhappiness and frustration could be obviated if adults had a better understanding of the feelings and perceptions of children. Inasmuch as adults are more mature and actually more flexible than children, it is easier for them to understand and make adjustments for the kinds of perceptions children have than it is for children to understand and make adjustments to adult perceptions.

Motives That Lie "Beyond Awareness." There is an important point to keep in mind as we attempt to understand human behavior: we are generally unaware of the more important forces and motives that lie behind our own behavior. This point is easily forgotten or overlooked. Often we see others

doing things that are not in their best interests and hence try to help them by showing them what they are doing that is wrong. Then we are surprised when they vigorously deny having done the very thing we have seen them doing. Whenever we try to help adults in this way and find ourselves rebuffed, we usually tell ourselves that we should have minded our own business in the first place. But with children, our attitude is different. When children deny something we have seen them do with our own eyes, we feel that they are being willful, are lying, are deliberately defying us, or are just being difficult and obstinate. It is hard to grasp the fact that children, like adults, have much difficulty in seeing their behavior as it appears to others.

Just before the sixth grade was dismissed for the day, Miss Roth asked Dick Hansen to see her after school. She tried to tell him unobtrusively, so as not to embarrass him in front of the classroom group, but she was not too successful. Dick had been such a problem in the month since school began that most of the class kept half an eye on him in order not to miss what he would do next. So when Miss Roth went over to Dick's desk and said something in a low voice, every child in the room knew he was being asked to stay after school.

When the last child had left, Miss Roth straightened up her desk while Dick waited sullenly. She really didn't like to keep him waiting, and the desk straightening actually wasn't very important, but she wanted to think through how she would handle this matter. Things simply could not go on as they had.

When she had things in order, she turned and faced Dick.

"Dick," she said, "what are we going to do with you?"

The sullen look faded from Dick's face, to be replaced by a perplexed frown. "I don't know what you mean, Miss Roth."

Miss Roth was firm. "I think you know what I mean."

She took a sheet of paper from under her desk blotter. "Last Friday, when you were in line at the cafeteria, you shoved the children ahead of you so hard that the little girl who was getting a bowl of hot soup spilled it over her hand and had to get first aid."

Dick started to say, "Well, I didn't . . .," but Miss Roth raised her hand.

"I'm not finished, Dick. There's lots more. Monday, you put your foot out in the aisle and tripped Leonard, who was coming up to erase the blackboards for me. He didn't get hurt, but he *could* have had a nasty fall. The same day, during recess, I saw you go over to the girls' play area and take their volleyball. Mrs. Richards saw you, too, and made you return it, but not without a big argument from you. Tuesday, you interrupted me four times when I was giving instructions on the new history workbooks."

"I just wanted to go to the toilet," Dick muttered.

Miss Roth ignored his interruption. "Tuesday was also the day you brought a lizard to class. It took us twenty minutes to capture the poor thing. On Wednesday,

you were half an hour late to school, the fourth time you have been tardy since school started a month ago."

She paused and looked at Dick. The sullen look was back.

"I could go on and on, but there wouldn't be any point to it. I think it should be clear that you are a real problem to me, to the class, and, I think, to yourself. What are we going to do with you?"

"I don't know where you got all that stuff," Dick said, defensively. "A lot of it isn't so, and besides I can explain some of the things. That business about Mrs. Richards. I don't know what she was raising such a big fuss about. I was walking by and one of the girls yelled: 'There's Richard the chicken-hearted!' I yelled back something and they dared me to take their ball, so I did."

Miss Roth sighed. She knew this wasn't going to be easy. "You shouldn't have been near the girls' play area in the first place, and in the second . . ."

"Yeah, I suppose I'm supposed to take all the stuff anybody wants to throw at me lying down," answered Dick angrily. "Well, I'm not going to do it. Nobody's going to push *me* around!"

Miss Roth tried another tack. "Let's see, Dick, you're about five feet eight?"

"Five, nine and a half. So what?" he retorted belligerently.

"Well, you're the tallest boy in school, anyway," Miss Roth went on, trying not to show her exasperation. "The boys in the sixth grade look up to you. You're a kind of a leader. It doesn't help them get along in school when you keep doing the things I've mentioned. We want to help you, Dick. We really do."

Dick looked at her his eyes blazing. "If you really wanted to help, you could stop picking on me. Everybody tries to shove me around—teachers, my sisters, my folks, and the kids at school. You say you want to help me," mimicking her tone, "but you're just like all the rest. You make me sit here so you can read me a bunch of stuff. Maybe I did those things or maybe I didn't. I don't even remember half of them. They're all little things that don't amount to much anyway, but to hear you talk, you'd think I was a criminal or something. Why—why does everybody have to make trouble for me?"

Dick evidently did not expect an answer to that question, for he put his head in his hands and cried bitterly.

Miss Roth sat at her desk aghast at the vehemence of Dick's attack, frustrated at not being able to make him understand, pitying him and wanting to comfort him, but not knowing how to do any of these things or *what* to do at all. . . .

One of the most frustrating things about Miss Roth's situation is that she has Dick "dead to rights." She has a list of things she has seen Dick do. The boy is annoying, impertinent, cruel, insubordinate—any and all of a long list of words that his teachers and parents and even his classmates would agree on. Yet he doggedly refuses to admit or accept these things about himself. And, worst of all, although she sincerely wants to help him, he sees her as an enemy.

There are various hypotheses that may help us understand why Dick denies Miss Roth's accusations. For one thing, the behavior she describes is apparently inconsistent with his self-concept. She paints the verbal picture of a boy who is a bully, who is against everyone, whereas the picture Dick has of himself is that of someone who is always being criticized or picked on. He is so obsessed with the idea of the world's being against him that he cannot see how much he is against the world.

There are, of course, a number of other hypotheses that could account for Dick's behavior. For example, in what way does Dick's height create problems for him? Here are some other questions that might lead to useful clues:

What kinds of basic needs are not being met for Dick, and how does his behavior constitute an attempt to meet these needs?

What kinds of "reinforcing events" experienced in Dick's early childhood may have resulted in the kind of behavior he displays?

What kinds of "reinforcing events" are probably occurring at school that aggravate Dick's problems?

Think back over your own elementary school experiences. In what way would Dick have been helped by the kind of school you attended? In what way would he not have been helped?

In what way does Miss Roth's attitude help Dick? In what way is it not helpful?

Some school authorities would react to Dick's behavior by "getting tougher" with him. In what way would this help him? In what way might this worsen the problem?

Other authorities might advise "taking it easier" with him. In what way would such a policy help him? What risks would such a policy run? If Miss Roth adopts such a policy, what other steps should she take?

Behavior Is Both Purposeful and Complex. Dick's problems lead us to two more points about behavior: all behavior has some purpose, and all behavior results from a multiplicity of causes.

Let us take the first point. Dick's behavior is not accidental; he did not just "happen to be bad." He has become involved in this behavior as a way of coping with his anxiety. Something is bothering him, and aggressive, rebellious behavior is Dick's way of handling this bothersome feeling. Furthermore, his behavior has symbolic meaning for him. His rebelliousness may be a way of saying to the world, in effect: "You can't do this to me." Or it may be a way of saying: "Nobody likes me. How could anybody like me; I don't like myself. But look at me, look at me. If you look at me while I pull my pranks, I'll forget about your not liking me."

These are some of the many motives that might lie behind such rebellious behavior. A complete list of motives would be a long one indeed, because there are many forces, both internal and external, that bear upon each of us and contribute in some way to the behavior we display. Furthermore, each act, each bit of behavior, has the purpose of meeting some need, reducing or forestalling some anxiety, or symbolizing some feeling.

The second point—the multiple causality of behavior—is equally important. In our everyday dealing with one another, we are inclined to look for single causes for behavior, partly because it is easier to cope with the behavior of others if we assume it is due to a single cause. If a youngster misbehaves in a classroom, we assume it is due to a “need for discipline.” So we prescribe punishment and go on to the next problem, assuming we have solved this one. We encounter a youngster who cannot read and assume that he has not been taught to read properly. Hence we apply ourselves to the task of teaching him properly, with the tacit assumption that we are better teachers than the ones he has had. And so we go through life, assuming single causes for the behavior we encounter and attempting to solve problems with solutions appropriate to the single causes we identify.

One of the reasons why our attempts to deal with problem behavior so often fail is that we are overlooking the complex constellation of causal factors or forces behind every act. In trying to account for Dick Hansen's behavior perhaps we might find that *all* the hypotheses or hunches we have developed have some truth in them, even though there are contradictory elements in them. If so, this would not be unusual. The chances are that some of the hypothesized causes would turn out to be more important, more crucial than others, but this would not mean that the others were invalid. There is a vast and complex network of conflicting needs, demands, and forces that we have to contend with at any given moment in our lives. We are figuratively pushed and pulled a dozen directions at once. We therefore try to respond to the forces that seem most important to us and to satisfy as many demands as possible.

Doreen is a ninth-grader who is enrolling in first-year algebra. She is taking algebra because her parents expect her to and because she wants to go to college. But her best friends are taking a business sequence and do not plan to go to college. She feels a little lonely, taking algebra without anyone she knows. She is afraid of algebra. She has heard that it is a terrifically hard subject, and she is afraid she might fail. But she cannot drop out of a course just because she might fail. That would not be proper. It would disappoint her parents, and she would be ashamed of herself. Her counselor wants her to take algebra. Her counselor thinks she is good college material and that she has the intelligence and the background to do

algebra. Doreen is not so sure, but she does not want to disappoint the counselor, any more than she wants to disappoint her parents.

We have listed just a few of the many factors or forces that favor or disfavor Doreen's enrolling in algebra. She enrolls in it because the forces favoring her enrollment are stronger than the forces against it, thereby satisfying the most pressing needs at the expense of less important needs. Every behavioral act is a compromise whereby we try to satisfy as many needs and cope with as many demands as possible, but the needs and demands that are the most powerful and the most pressing at the moment are the ones with the greatest influence. For Doreen, it is more important to fulfill her parents' expectations than it is for her to conform to the expectations of her age-mates. The choice she makes involves some anxiety, of course, because it means being isolated from her friends for part of a school day. Other adolescents might be moved to make a different decision in a similar situation, because the need to be with friends and to behave in ways acceptable to the group often carries more weight than the opinions and wishes of parents during this stage of development.

SUMMARY

Human behavior may be viewed from the standpoint of forces "inside" and "outside" the individual that impel his thoughts, feelings, and actions. This chapter is principally concerned with the "inside" forces. Although some psychologists prefer a system that explains behavior in terms of "primary drives"—internal forces that are largely physiological—other psychologists prefer to think of human behavior as impelled by needs to be competent and adequate. These needs may be classified in a hierarchy ranging from the most simple and biological to the most abstract and complex. Needs for belongingness and self-actualization are sometimes described as needs for affiliation (n Aff) and achievement (n Ach). Both these needs are powerful motives during the school years. When needs are frustrated or threatened by possible frustration, particularly when needs at the more abstract and socialized levels are involved, we are likely to experience anxiety. Much of our behavior that appears contrary to our best interests is apparently the result of attempts to reduce or ward off anxiety. Indeed, all human behavior can be interpreted in terms of direct or indirect attempts to cope with anxiety in some form or other. This concept makes particular sense in view of the fact that the experience of anxiety is so painful.

The environment has a powerful effect on our behavior, because it controls

the means for satisfying our needs. When our attempts to secure satisfaction are rewarded, the behavior that preceded the satisfaction is said to be "reinforced." Such reinforcement is the basis for social learning, which in turn is the basis for the individual patterns of behavior that make us the individuals we are. The need for satisfaction leads both human beings and animals to prefer environments rich in stimuli (which offer greater possibilities for satisfaction) over environments that are poor in stimuli.

Genetic factors constitute another dimension of the "inside" forces that produce individual differences in behavior. The role of genetic factors is only partially understood by psychologists and other students of human behavior, hence our inability to determine the relative contributions of genetic factors and environment to behavior.

Of perhaps greater immediate importance in the determination of our behavior is the way in which we view ourselves and our environment. We organize these perceptions into what psychologists call the "self-structure," which includes the "self-concept," the "perceived self," and the "perceived environment." Our concepts of ourselves and our environment constitute "reality" for us, and this "reality" forms the basis for our actions, feelings, thoughts, and decisions. We are not generally aware of the ways in which our behavior is influenced by our concepts of self and environment. Furthermore, our lack of awareness of the self-structure of others leads us to misunderstand and misjudge their behavior. This difficulty becomes particularly acute when we try to work with children, because we are inclined to forget that the concepts children have of themselves and their environment tend to differ markedly from the concepts adults have of the same children and the same environment.

In attempting to develop an understanding of learners and the concepts and needs that underlie their behavior, it is important to keep in mind that all behavior, however irrational it may seem, has purpose and results from a multiplicity of causes.

SUGGESTED PROBLEMS

1. When Mr. Parchen returned to his class in civics after a brief absence, he caught Andy Mayhew throwing chalk across the room at another boy. He asked Andy to leave the room and go down to the principal's office. Andy replied: "Try and make me." Mr. Parchen walked right up to Andy, looked him in the eye, and said: "Leave the room, Andy." He did not see Andy any more that day until after school, when he looked out of the window and saw him and five other boys roaring down the street in a stripped-down old car,

Educational Psychology in the Classroom

shouting and hooting. What internal and external forces were very likely operating to cause Andy to defy Mr. Parchen?

2. Mrs. Fritchman was somewhat alarmed when her daughter, Carrie, came home from her first day in junior high school. Carrie was not her usual cheerful self, but was depressed and discouraged. She said she disliked all her teachers and hated her new school. What psychological needs do you think are involved in Carrie's behavior? In what ways does anxiety enter into the situation?

3. What are some of the ways in which your concepts of yourself and your environment (including people who play important roles in your life) differ from those you had when you were in high school? In what ways do they differ from the concepts you had in grade school?

4. In what ways do you think your concepts of yourself differ from those your friends have of you? Your instructors? Your parents?

5. Describe some of the ways in which reinforcement has shaped your behavior and made you the kind of person you are today.

6. What are some of the ways in which n Aff and n Ach have contributed to your present status as a student? Describe a situation in which n Aff and n Ach are in conflict for you. How do you resolve such conflicts?

SUGGESTED READINGS

- Baller, W. R., and Charles, D. C., *The Psychology of human growth and development*. New York: Holt, Rinehart, and Winston, 1961. Part II contains chapters on genetic and perceptual factors in behavior, psychological needs, and emotion.
- Charles, D. C., *Psychology of the child in the classroom*. New York: Macmillan, 1965. See Chapter 1 in this brief paperback: "Motivation: why children learn."
- Combs, A. W., and Snygg, D., *Individual behavior: a perceptual approach to behavior*, rev. ed. New York: Harper, 1959. A highly readable presentation of the perceptual approach to the understanding of human behavior, with special application to problems of education and learning.
- DeCecco, J. P., ed., *Human learning in the school*. New York: Holt, Rinehart, and Winston, 1963. See Chapter 2, "Motivation: does curiosity kill the cat?"
- Fowler, H., *Curiosity and exploratory behavior*. New York: Macmillan, 1965. A brief discussion from the point of view of the experimental psychologist, followed by research papers dealing largely with animal experiments.
- Jersild, A., *In search of self*. New York: Teachers' College, Columbia University, Bureau of Publications, 1952.
- Lindgren, H. C., *Psychology of personal development*. New York: American Book, 1964. The first seven chapters consist of an expanded discussion of the part played by psychological needs, self-concept, and anxiety in human behavior.

- Maslow, A. H., *Motivation and personality*. New York: Harper, 1954. An integrated collection of essays on psychological factors in mental health, achievement, creativity, and self-actualization.
- Rogers, C. R., *Client-centered therapy*. Boston: Houghton Mifflin, 1951. In this author's opinion, Chapter 11, "A theory of personality and behavior," is one of the clearest and most concise explanations of how personality develops and why people behave as they do. Like the treatment by Combs and Snygg, the point of view is largely perceptual.
- Staats, A. W., and Staats, C. K., *Complex human behavior: a systematic extension of learning principles*. New York: Holt, Rinehart, and Winston, 1963. See chapters dealing with personality and human motivation. Treatment is largely from the point of view of reinforcement psychology.
- Thelen, H. A., *Education and the human quest*. New York: Harper, 1960. See Chapter 2—"What makes Johnny tick?"—in this provocative and challenging book.

3 The Growth and Maturation of the Learner



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Evidences of Growth and Development. When I was a boy it used to annoy me that grown-up visitors seemed obsessed with the need to comment on my growth in size. "My, but you're getting to be a big boy!" "Haven't you grown, though!" "Why, you're almost up to my shoulder!" Exclamations like these only aggravated my feeling of awkwardness and embarrassment, and I wished sometimes that I would stop growing so that I would be less conspicuous. *I* was not conscious of having grown, except perhaps when I noticed that my clothes were not fitting as well as they used to.

Now that I am an adult, I see things differently, of course. It is somewhat of a shock to notice suddenly that the baby who lived next door when we moved in is now attending kindergarten, or that the girl who used to wear blue jeans and a frayed shirt when she played mumblety-peg on my lawn is now a dainty debutante who looks as though she would not know which end of a jackknife to pick up.

One of the reasons why we find it a little difficult to adjust to what seem to be startling changes in children is that our concepts of them tend to be rather static. Let us assume that we become acquainted with a two-year-old girl. Having made her acquaintance, we are likely to go away with a fairly accurate picture of a two-year-old girl in our minds. When we see her again after a year or so, we are startled by the contrast between the picture we had in our minds and what we see before us. Even if we see her more frequently, we have a little difficulty in bringing our mental picture up to date each time we see her. Some people have more trouble with this than others, but the tendency is for our concepts of children to lag behind their actual growth and development.

Nor is the teacher or the parent who sees the child every day usually aware of many of the changes that are taking place. To begin with, the changes that constitute growth and development usually come gradually; hence we

are seldom conscious that they are occurring. Gil complains to his parents that he is having trouble with subtracting single-digit numbers, like 7 from 9. His father tries to help him, but his methods seem different from those of the teacher, so the attempt is dropped and nothing more is said. A few months later, the parents visit Gil's classroom during Public Schools Week and, in looking over his work, are surprised to find that he is now doing a rather good job of subtracting *three*-digit numbers. Only when we have a good opportunity to compare an earlier form of behavior with current behavior are we able to see that growth has occurred.

It is not easy to develop a broad and dynamic understanding of the process of growth. We tend to single out special aspects of growth for our attention, instead of trying to see it as a total and continuous process. For example, we commonly think of growth as a series of stages beginning or ending, say, at six months, eighteen months, three, six, and eight years, and the like. Such formulations make growth *appear* to consist of well-defined stages or periods, rather than as the continuous and more or less gradual unfolding that it actually is.

Growth and development express themselves not only in changes in appearance but also in changes in behavior. It is the changes in behavior that are most significant for the teacher. For one thing, most of the new behavior that appears is *learned* behavior, and the teacher, as a specialist in learning, will want to play some part in guiding or stimulating the kind of learning that is taking place. A teacher must therefore be alert and sensitive to the many ways in which the process of growth and development reveals itself, for such sensitivity is a necessary part of developing a working understanding of students and their behavior.

Here is another reason why we should be concerned with the growth and development of children. When we evaluate the learning of students (which means that we are to some extent evaluating our own work as teachers), we are inclined to direct our attention primarily to their *current* status. We see Laura as someone who is up to her grade in social studies and science but behind in English and reading. We see George as someone who does not pay attention very well and who interrupts and disturbs the other students. It is relatively easy to determine the current level of academic work or social behavior of students but relatively difficult to fit this information into some kind of historical or psychological perspective that takes into account their developmental patterns and problems. Laura *is* behind in English and reading, but did she make any progress during the last year? Does George's behavior have anything to do with his being a late-maturing adolescent? When we stop to think about the children who come to our attention and put

together some of our observations, we may often be surprised to find that bits of behavior that have annoyed or perplexed us suddenly become more understandable.

The Concept of Maturity. When we say that a child is "up to his grade in reading," we are in effect making a comparison between his behavior and the behavior of other children of similar age. We are, to use the statistician's term, comparing him with the "norm" for his grade. We can use this method of comparison with many kinds of behavior other than reading, not only with educational skills and knowledge of subject matter, but also general intellectual competence, social competence, emotional behavior, physical coordination, and so forth. When we make such comparisons, we are making judgments regarding a child's *maturity*. Maturity, used in this sense, refers to the extent to which a child is in step with other children his age. A boy who has started to develop secondary sex characteristics (growth of hair in the pubic and underarm regions, deepening voice, and so forth) at the age of twelve would be considered an "early maturer" or "physically advanced for his age," for such changes more commonly appear at fourteen. Another boy who first begins to show these characteristics at sixteen would be considered a "late maturer" or "physically immature for his age." The extent to which a child anticipates or lags behind the developmental norms for his age may tell us a great deal about his behavior. We shall have more to say about this later.

There are norms for social and emotional behavior, just as there are norms for physical development. A child of eight who is unable to engage in group play, and whose play pattern resembles that of a three-year-old in other respects, may be considered to be socially immature. The fifteen-year-old boy whose attempts to interact with other students consists largely of the shoving, pushing, and half-playful fighting more characteristic of preadolescents, is equally immature.

Maturity is a term that may be used in one of two different ways. The first is the concept of maturity we have been describing: behavior that is appropriate to the age of the individual concerned. The second use of the term refers to the behavioral standards and expectations of adults. If we use the term "maturity" in this second sense, most of the behavior displayed by children may be considered immature. It is of course unrealistic to expect children to come up to adult norms, although adults frequently demand behavior from children that is more appropriate of adults than it is of children, without being aware that their demands are unreasonable.

When psychologists speak of "mature" or "immature" behavior in reference to children, they are usually referring to the kind or level of behavior appropriate to the age of the child. Although temper tantrums are "immature"

according to adult standards, calling them "immature" does not help us understand the individual who displays such behavior. If the child in question is three years old, then we must keep in mind that three-year-olds commonly have temper tantrums, and that they usually outgrow them. If he is a nine-year-old, then we are more seriously concerned, because temper tantrums are not common among nine-year-olds. Temper tantrums would not be considered immature for a three-year-old, but they would be for a nine-year-old.

Let us look at another example. Roger, aged four, is happily playing with building blocks in the corner of the nursery school. Felice, the same age, wanders in after a vigorous workout on the jungle gym. Her attention is drawn to the buildings and bridges that are taking shape, and she decides that the most interesting thing in the world right now is to play with blocks. As she moves into the area, Roger makes loud cries of protest and hits Felice. It may be that he is reacting to her invasion of his personal world, his life space for the moment. Observations of animals show that the concept of "my territory" is firmly established among many species, and that birds, mammals, and even certain kinds of fish will fight if their private area is invaded. It may well be that this instinct to maintain and defend a personal area is present in humans and appears quite early.

Roger has an additional basis for his protest. Although he has been playing with the blocks for only fifteen minutes, he has "invested" something of himself in them, and they have in turn become a part of him, psychologically speaking. They are *his*; they *belong* to him; for the moment, they are a *part of his perceived self*. To share them would be a little like losing a portion of himself. Perhaps he feels anxious at this prospect; he certainly feels psychologically threatened and proceeds to attack the source of his threat. He forgets that nursery school toys belong to all the children; he forgets that he has often been told to "share things"; he forgets that he is under the surveillance of watchful adults, who even at that moment are bearing down upon him from all directions.

When Roger is seven, he may still have a degree of possessiveness about any school equipment he happens to be playing with, but he will be less involved in it emotionally. Furthermore, requests on the part of another child that he share such equipment would probably be recognized by him as legitimate. He would be more likely to remember that one "takes turns" with school equipment and that even if he has to surrender it to another, he will eventually get his turn again. Because he is aware that what he is giving up or sharing is not really his, he is less anxious and less hostile.

Kinds of Maturity. There are at least three kinds of maturity in the examples given: intellectual, social, and emotional. Roger at age seven has

attained a degree of intellectual maturity, because he can now discriminate between what is really his and what is community property. This ability to discriminate is basic to his willingness to accept the rights of others to use equipment that belongs to everyone. He has also attained a degree of emotional maturity in his ability to restrain the expression of his irritation and hostility when the other child presents his claims to use the equipment in question, even though the temptation to resort to angry words and blows may be quite strong. A great many four-year-olds are powerless to resist such temptation. Becoming more mature means, in part, developing the inner strength to deal with one's emotions.

A fourth type of maturity, physical maturity, is perhaps the most basic of all. This kind of maturity is the most visible, in the sense that its progress can be observed and measured most readily. Evidence of physical maturation include increases in height and weight, changes in body build, the development of secondary sex characteristics, loss and eruption of teeth, and the ossification (change into bone) of cartilage in the wrist. Indeed, one investigator claims that X-ray photographs of the hand and wrist constitute the most dependable overall measure of the amount of physical maturation that has taken place (Greulich, 1950). We say that physical maturity is basic to all other aspects of maturity, because the ability to engage in the kinds of activities involved in intellectually, socially, and emotionally mature behavior depends on the development of certain neurological, glandular, muscular, and skeletal structures and functions—in other words, on physical or biological maturation.

Intellectual Maturity. Of the four dimensions of growth and maturity that we have mentioned, the one with which schools have traditionally been most concerned is intellectual maturity. To be sure, communities establish schools in order to provide the means to stimulate the mental growth that presumably would not occur if there were no schools. This does not mean, however, that the community and the schools can afford to be unconcerned about the other dimensions of maturity. In view of the fact that all dimensions of maturity are related, we cannot expect children to advance in intellectual maturity more rapidly than in physical, emotional, and social maturity. On the other hand, we are continually discovering that we can do a better job of helping youngsters develop intellectually by giving them opportunities for learning and self-expression in the emotional, social, and physical areas of life. And sometimes we find ourselves paying particular attention to the nonintellectual aspects of a child's life, because certain kinds of difficulties—physical disabilities, emotional problems, inability to get along with others—are interfering with his ability to learn in the classroom.

Educational Psychology in the Classroom

The farther we get from the intellectual aspects of growth and development, however, the less certain we are that we are involved in activities that are rightfully the responsibility of the school. There is a fairly extensive area of ambiguity that lies between the responsibility of the school to foster learning and the responsibility of the community to provide welfare services for children. Here are some of the puzzling questions that stem from this ambiguity and that often have to be resolved by the school and other agencies or organizations in the community:

Should the school be responsible for the after-hours recreation of children? Or is this the responsibility of the city recreation department? When school playgrounds constitute the recreation facilities in question, problems of jurisdiction inevitably arise.

Who should teach manners and other forms of acceptable social behavior? Is this the responsibility of the school or the parents or both?

What about the building of character and the teaching of moral values? Are these functions the responsibility of the school, the parents, religious organizations, or voluntary organizations like the Scouts?

Who should provide psychotherapy for emotionally disturbed children? Is this the responsibility of the school, the community, social welfare agencies, or the parents? An easy answer to this question is "parents," but parents are often unwilling or unable to follow through when psychotherapy is clearly indicated and strongly recommended. In the meantime, the child in question is unable to make any progress in learning, is disturbing the other children in the class, and may be well on the road to a career in delinquency.

Resolving such problems is never easy, and no standard formula applies. Each school system and each community deals with its constellation of problems differently. Wheresoever the lines of authority and responsibility are drawn, however, the school has a right to be involved actively or in a consultant capacity in any problem that affects children's learning. It has a right to raise questions about its own activities and responsibilities and even to prod parents and community agencies into removing the obstacles that interfere with learning. Some communities have therefore enlarged the scope of the school's services beyond those specifically concerned with the intellectual growth and development of children. Hence some schools provide after-school recreational supervision, psychotherapy, dental care, and subsidized lunches. A great many schools provide vocational counseling; special courses like "senior problems" or "senior goals," that are concerned more with emotional and social maturity than with academic aspects of learning; and courses that are concerned principally with recreational, vocational, or artistic skills. These

The Growth and Maturation of the Learner

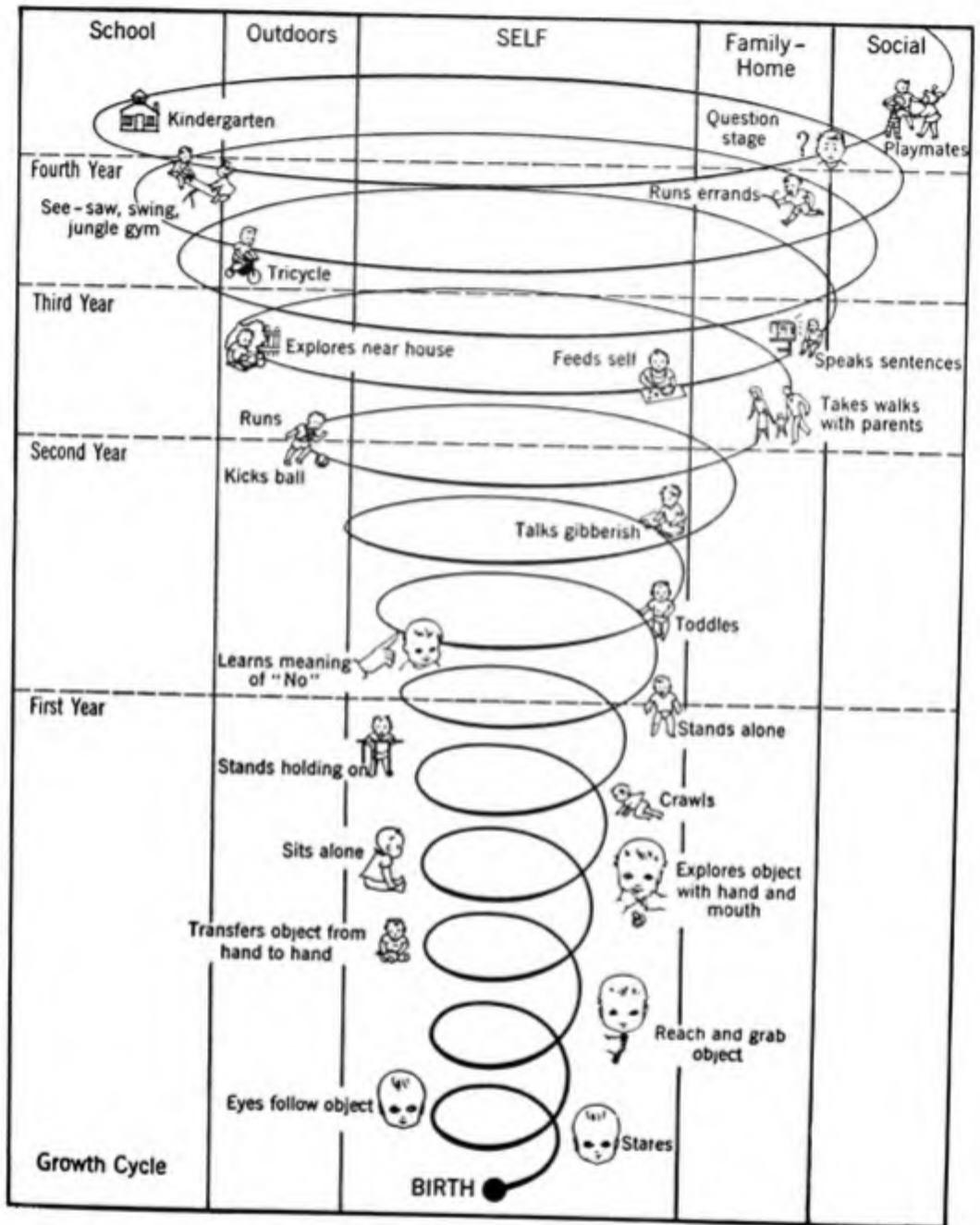


FIGURE 3-1. This spiral "growth cycle" is based on the research of Arnold Gesell and his associates. It covers the first five years of life and shows how the various aspects of maturity are interrelated. (Courtesy Arnold Gesell and "Life Magazine," based on material drawn from A. Gesell et al., "The First Five Years of Life" and "Infant and Child in the Culture of Today," New York, Harper, 1940 and 1943.)

Educational Psychology in the Classroom

nonacademic activities of the school have in recent years been sharply criticized by people who believe that the curriculum of the school should be limited to activities of an academic nature, as was characteristic of American schools during the nineteenth century or European schools today. Such critics are saying, in effect, that schools can develop academic competence (one aspect of intellectual maturity) without considering other aspects of maturity. Such an idea—namely, that one aspect of maturity can or should be isolated and promoted without regard to other aspects of maturity—seems to negate a great deal of what psychologists have learned about human growth and development and thus appears to be unsound.

The relationship between intellectual and physical development is not always an obvious one. A child cannot do much thinking until he can talk,

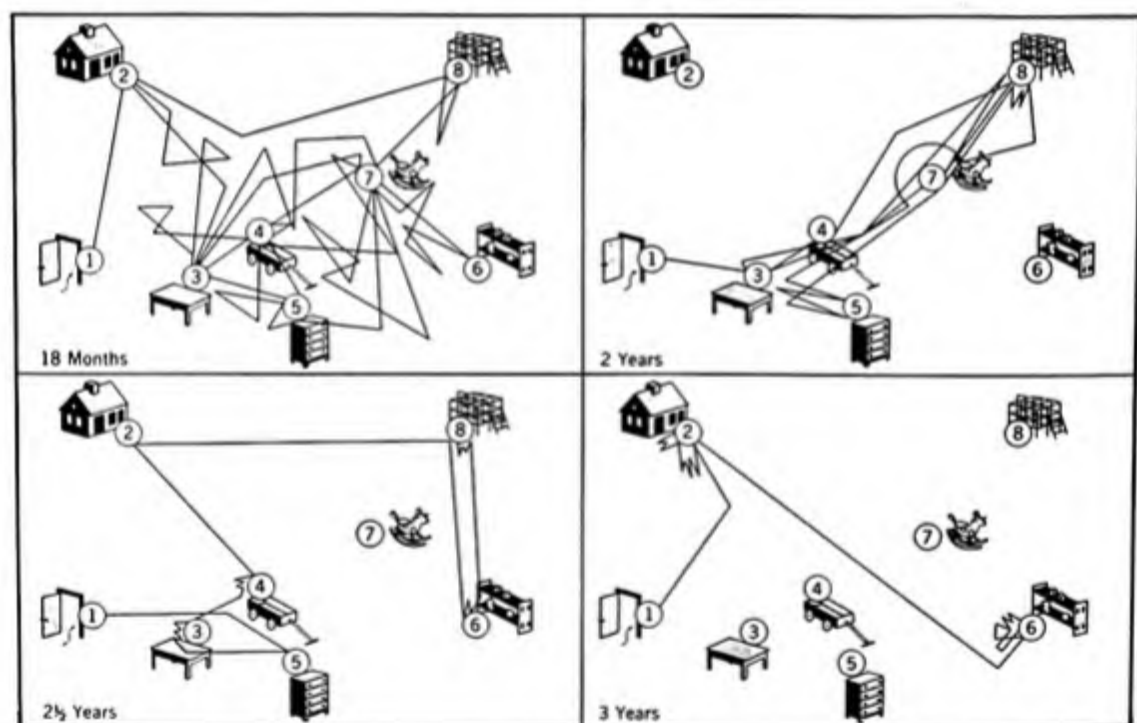


FIGURE 3-2. Nursery pathways compiled from hundreds of observations show the seven-minute track of an average eighteen-month-old child (top, left) as he races from the door of a nursery (1) to playhouse (2) and then begins an erratic trip to table (3), cart (4), chest (5), shelves (6), hobby horse (7), and jungle gym (8). At the age of two, the average child begins to concentrate his interests a little more. The playhouse and shelves are ignored, but there is still much running back and forth among toys. At two and a half, there is less running back and forth and more lingering beside a toy to explore its potentialities. At three, children usually pick a few toys on which to focus their full attention. (Courtesy Arnold Gesell and "Life Magazine," based on material drawn from A. Gesell et al., "The First Five Years of Life" and "Infant and Child in the Culture of Today," New York, Harper, 1940 and 1943.)

and he cannot talk until he is able to assume an erect position and to establish control over his lips, tongue, and throat. Nor can he learn to read until the muscles in his eyes can accommodate the specialized kind of focusing essential to reading. Some of the work that has been done by Arnold Gesell and his co-workers at the Gesell Institute for Child Development at Hartford, Connecticut, shows how the various kinds of maturation and development are interrelated. Figure 3-1 consists of a developmental "time schedule" covering the years between birth and age 5. Note how the child's interests and activities move in ever-widening circles, first including only the physical self and later involving the physical and social environment. Figure 3-2 deals with another aspect of maturity: attention span. The child of eighteen months can focus his activity on a single object only briefly, but a year and a half later he derives pleasure from becoming involved in a play object for extended periods of time.

Another behavioral scientist who has concerned himself with developmental stages of sequences in children's behavior is Jean Piaget, a Swiss who was originally trained as a biologist, but who has for almost fifty years studied the growth of children's intellect or, to use the more general term, *cognitive development*.

Piaget and his co-worker, Bärbel Inhelder, see cognitive development as being a continuous process of unfolding, but with recognizable stages or levels:

1. The *sensory-motor phase* (approximately ages 0 to 2), in which the infant in effect "creates" a personal world related to his desires for physical satisfaction and within the scope of immediate (here-and-now) sensory experience. During the final months of this phase, the child begins to reflect about his experiences, starts to develop an awareness of the characteristics and particularly the *permanency* of objects, and obtains some glimmerings of the notion of *causality* in events. He is, however, confused by problems of differentiating between himself and his environment.
2. The *period of preparation for conceptual thought* (approximately ages 2 to 11 or 12) is further divided into the *preconceptual phase* (ages 2 to 4), the *phase of intuitive thought* (ages 4 to 7), and the *phase of concrete operations* (ages 7 to 11). During the early part of this period, the child is preoccupied with play, begins to develop language ability, learns to use imitation, and evaluates and reevaluates his perception of the environment. During the later years, he organizes systems of classifications for the perceptions and concepts that he has acquired and develops concepts of social justice and reciprocity.
3. The *phase of cognitive thought* (ages 11 or 12 and beyond). During this period, the child (now a youth) acquires the ability to think and reason

beyond his own immediate world and his own beliefs. Problems are approached more systematically, and less on a random, trial-and-error basis. Ideas of social justice and proper social interaction become clarified and expanded (Inhelder and Piaget, 1958).

There is some question as to the extent to which Piaget's description of children's cognitive development can serve as the basis for developing educational programs. Although his theoretical structure has been worked out meticulously and is based on thousands of observations and interviews, one wonders whether different patterns of cognitive development would emerge in other cultures. The extent to which Piaget's theories are limited to the kind of behavior that results when children attend middle-class European schools and the extent to which they are representative of children in general has not as yet been resolved. The same question would, however, arise with any theory that places certain kinds of cognitive processes at certain ages or stages of physical development. Although a great deal of research supports Piaget's theories (Flavell, 1963), a growing number of studies do not. Richard C. Anderson (1965), for example, taught first-graders a number of complex problems which could be solved by the technique of varying one factor at a time and holding the other factors constant. According to Inhelder and Piaget (1958), children should not be able to make use of such problem-solving strategies until they are fourteen to sixteen years of age, but Anderson found that his group of children was not only able to learn the principles, but was also able to apply them to a different set of problems. Research such as that of Anderson implies that any theoretical framework of maturational stages should be accepted as tentative and as suggestive of the kinds of skills children might be expected to develop at certain ages, rather than as a definitive statement with universal application.

Actually, Piaget does not intend that his system be interpreted rigidly. He recognizes that children may develop rapidly or slowly within the structural framework he has proposed. Retardation in cognitive development may occur because of brain damage, or it may occur because the opportunities to learn are not available. One of the classic studies of the effect of a restricted environment is Hugh Gordon's (1923) study of intellectual growth of English children. He found that children who lived on canal boats, and who attended school only one or two days a month, showed a decline in IQ between the ages of four and fourteen. This phenomenon was due not so much to a loss of intellectual ability as it was to the fact that their rate of intellectual growth was retarded. When the canal-boat children had reached the age of fourteen, they were functioning at a less adequate level than that attained by children

living ashore. When Gordon tested gypsy children, whose families also moved around a great deal, but who attended school about seven times more frequently than canal-boat children, he found that the loss in IQ was not so pronounced, although these children nevertheless suffered by comparison with children who had normal patterns of school attendance.

The way in which school attendance affects the whole range of competence is demonstrated by a study of several thousand World War II army veterans. As indicated in Figure 3-3, those with less than grammar school education not only received a higher percentage of low ratings from their commanding officers, but also made poorer adjustment after their discharge from the Army. Although the extent to which an individual displays adequate patterns of behavior reflects the degree of social and emotional maturity he has attained, intellectual maturity is also an important factor in the sense that adequacy depends on his ability to make proper choices and decisions, to anticipate and solve problems, and to make realistic plans.

Even a brief exposure to schooling may have a facilitating or "speed-up" effect on cognitive development. Elizabeth A. Borum and Norman Livson

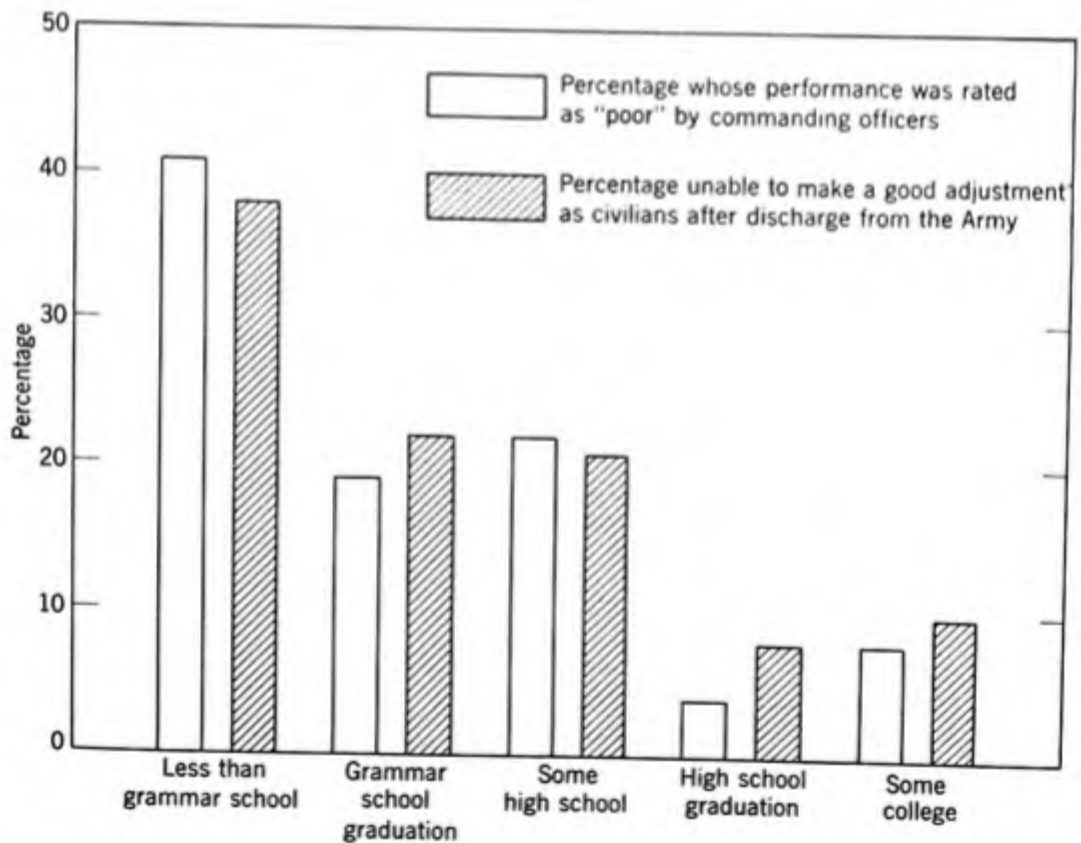


FIGURE 3-3. Failures in military and postmilitary performance of 3854 Army enlisted men, classified by educational level. (Ginzberg, 1959.)

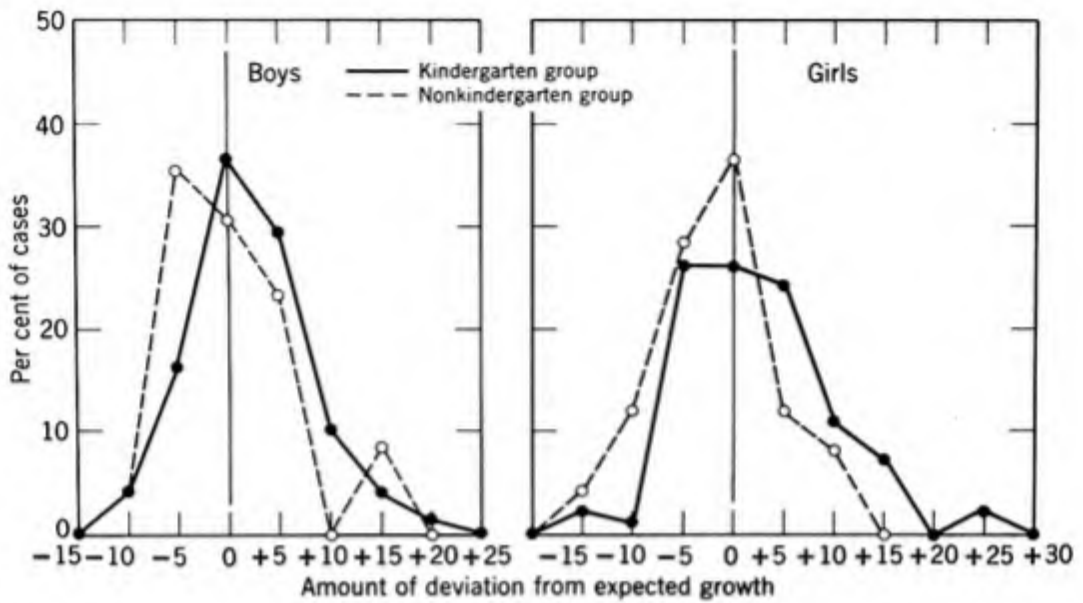


FIGURE 3-4. Differences in mental-test score change for children entering first grade who had attended kindergarten, as contrasted with those who had not. A “plus” value indicates an increase over the mental growth that would normally be expected, whereas a “minus” value signifies the opposite. Note that the children who had attended kindergarten had a slight but consistent advantage over those who had not. (Borum and Livson, 1965.)

(1965) of the University of California compared the changes in intelligence taking place in children who had attended kindergarten, as contrasted with those who had not. As Figure 3-4 shows, there was more of a tendency for the kindergarten group to increase their intelligence test scores than was true of the group not in attendance.

Social Maturity. One of the major educational trends during this century has been the expansion of the curriculum beyond the narrowly academic pattern of the nineteenth century into the area of social competence. This change has come about partly because parents, employers, and the community at large demanded that the school take some responsibility for developing social competencies in children, and partly because of a growing realization on the part of psychologists and educators that it was impractical and inefficient to separate intellectual development from social development. Thus in 1918 we find the National Education Association showing a concern for social maturity in formulating its “seven cardinal principles of education”: health, command of the fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character. Social maturity was also an important consideration in 1938 when the Educational Policies Commission of the National Education Association set forth a series of educa-

The Growth and Maturation of the Learner

tional objectives, concerned with the capabilities, understandings, and attitudes the Commission members felt students should attain as a result of the educational process. Much of what we attempt to teach in schools today has been included in the curriculum because we feel that it will help individuals cope with the problems of life. And most of the problems of life grow out of relations with others—that is to say, they are problems of social adjustment. Hence it follows that the need to develop social maturity is to a large degree the rationale of education: it is the “why” of education.

The word “development” means, essentially, an “unfolding,” and the direction of all growth follows this pattern in its general outward movement. Arms and legs grow outward from the center of the body, and the mouth can perform the intricate motions of eating and speaking long before the fingers have developed an equal degree of dexterity. And so it is with social development. The infant is at first completely self-concerned, but with successive stages of maturity his mother, his father, and then the other members



San Francisco State College—Joseph Díaz

The development of social maturity is facilitated by opportunities to collaborate and cooperate with others.



"But I've already got lots of pals—why can't you just be my father?"

Wilkinson, *The Christian Science Monitor*. (Reproduced by permission.)

By the middle of years of childhood, children begin to shift their interest and attention from their parents and other members of their families to age-mates outside the home.

of his family become objects of concern to him. During the preschool years he becomes moderately interested in playmates outside the family, but an active interest in outsiders does not generally appear until he is well into the primary grades. During the school years he acquires some new models for his behavior: teachers and classmates assume an importance that sometimes rivals

that of his family. By adolescence, many youngsters are more likely to take their cues from their peers than they are from their family. The adolescent also becomes involved in a number of different worlds outside the family and school: the employment world, the world of informal groups, the world of organized recreation, and so forth.

We can see this outward direction of development by contrasting the behavior of children at different ages in almost any kind of activity. Glen Heathers (1955) compared the nursery school behavior of two-year-olds with four- and five-year-olds and found that the younger children were more inclined to cling to or to seek attention and approval from the teacher, whereas older children were more inclined to seek attention and approval from one another. During the two-to-three year span, in other words, the children were inclined to turn from the teacher to the peer group in order to satisfy needs for affiliation and belongingness. Willingness to assume responsibility is primarily a social skill. Although adolescents are popularly supposed to be irresponsible, Dale B. Harris (1957) found a steady increase in responsibility with each succeeding year from age ten to sixteen. Helen R. Marshall (1958) studied preadolescents and adolescents with respect to their sociometric status (the degree to which each individual is chosen or accepted by others in his group). As Figure 3-5 shows, the older the child, the more likely he was to

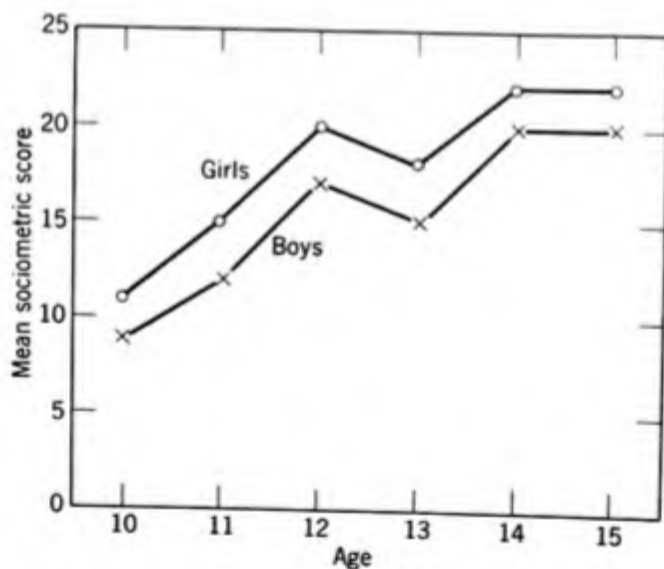


FIGURE 3-5. The relationship between age and social acceptance of preadolescents and adolescents in community youth groups as indicated by mean sociometric scores.¹ (Marshall, 1958.)

¹ "Mean sociometric scores" show the average number of times that individuals in each age and sex group were chosen or mentioned favorably by other members of their groups.

be accepted. Not only were the older children more popular in their groups, but they were also more accepting of others.

Still another index to growing social maturity is the change in interests that takes place during childhood. Arthur R. Jersild and Ruth J. Tasch (1949) studied the responses of over 2000 Missouri school children to an "open-end" type of questionnaire. Some of their data that are indicative of changes resulting from increasing maturity are presented in Table 3-1. In general, older children were more socially active than younger ones. Interest in games and sports (where the emphasis is on physical rather than social participation) was higher for preadolescents than for younger children, but dropped sharply for adolescents. Movies are more interesting to adolescents because the content and ideas communicated by this form of entertainment are generally beyond the level of comprehension of younger children. Attending movies is a way of participating vicariously in the adult life. Understanding and enjoying a film take a certain breadth of knowledge of and experience in social situations. Furthermore, because younger children have a shorter "attention span" than older children, it is harder for them to sit still and watch a movie screen for two to four hours at a time.

The data compiled by Jersild and Tasch show that interest in social activities increases during the age span covered, but so does interest in reading, an activity usually carried on alone. Improvement in reading skill and a widening range of interests are related to this increase in time spent in reading, but the latter is also affected by the greater ability of the older child to enjoy

TABLE 3-1. Responses Given by Children to the Questionnaire Item: "What I Like Best Outside School . . ." (Jersild and Tasch, 1949)

Category of Activity	Percentage of Children in Each Age Group Giving Responses in Each Category			
	Ages			
	6-9	9-12	12-15	15-18
Sports, play, games, outdoor activities	61	71	54	49
Movies	4	7	12	12
Social activities, organizations, Scouts, De Molay, dances	0	1	5	8
Reading, going to library	3	4	9	13
Self-improvement and understanding, including vocational placement and competence	1	4	7	12
Chores, duties, everyday routines	7	3	4	1
People	9	4	6	15

his own company for relatively long periods of time. During middle childhood and preadolescence, being with others is a dominant need, but with the onset of adolescence, an increasing number of children find that they can enjoy doing things by themselves as well. The adolescent also has a heightened interest in himself as a person, as the data in Table 3-1 show, and he is more conscious of the need to find his place in the world.

The steady decline in interest in chores reported by the researchers is hardly surprising. A finding that may surprise adults, however, is that 7 per cent of children between the ages of six and nine mentioned chores as the activity they liked best. However, such tasks provide a way of participating in family life; they are often a way of building and maintaining status and importance in the family group—a way of meeting the need to belong. But as children grow older, they find other groups to belong to, and they look for ways to achieve status with these groups.

Activities related to other people are relatively high during middle childhood, decline during early adolescence, and increase in later adolescence. People who work with adolescents recognize that the years from nine to fifteen cover a period in which hostility, rebelliousness, and problem behavior are at a peak. Hence it is not surprising that Jersild and Tasch found a lessening of interest in people during these years.

In recent years there has been some indication that children and adolescents are becoming more adultlike in their behavior—the tendencies toward earlier dating and earlier marriage are an indication. Evidence that this movement toward adult behavior may be general rather than specific is provided by a study conducted by Robert A. Koff (1965), who administered the Kent-Rosanoff word association test to 147 children between the ages of eight and twelve. When he compared their responses with adults, as well as with those of children fifty years previously, he found some interesting similarities and differences. Fifty years ago, children tended to give responses which were similar to the stimulus word (for example, King—Ruler), but in 1963 children gave a great many more responses which were opposites (for example, King—Queen). In 1916 the average child gave opposite responses only 3 per cent of the time, whereas in 1963 opposite responses were given 46 per cent of the time. This latter figure was more consistent with the response pattern for adults, who gave opposite responses 57 per cent of the time. In addition, the responses given by children in 1963 were significantly more like those given by adults than was true in 1916.

Emotional Maturity. We used to believe, when we thought that education was solely an intellectual experience, that emotions had no place in the classroom, but now we are beginning to find that they cannot be shut out. Whether



Berni Schoenfield

Learning skills related to adult roles—skills that call for concentration, coordination, and control—facilitate the development of certain aspects of emotional maturity.

a child learns to read, cipher, spell, to understand the causes of the War with Mexico, or even to catch a forward pass, will depend on whether he *wants* to learn, whether he feels a *need* to learn. A child will not learn as long as he does not want to learn and sees no sense in learning. It is, of course, possible for skillful teachers to help children develop the needs and wants that are vital prerequisites to learning, and this is what effective teachers actually do, often without being consciously aware that they are dealing with children's emotions. The need to consider the emotional aspects of learning, group behavior, and individual behavior is discussed at greater length and in various contexts throughout this book, for everything that happens in the

classroom is in some way related to the emotions of persons participating in the learning situation. Everyone, including the teacher, brings his feelings into the classroom.

One characteristic that is associated with emotional immaturity is dogmatism, or the rigid adherence to a certain viewpoint, coupled with an unwillingness to consider other points of view or contrary data. Inasmuch as the learning of complex concepts requires a degree of openness and flexibility on the part of the student, it is obvious that tendencies to be dogmatic would seriously impede his academic progress. Popular belief ordinarily holds that children are more teachable than teenagers and adults, because their minds (hence their attitudes) are as yet unformed. Teenagers, on the other hand, have the reputation of being negativistic, rigid, and arrogant—attitudes characteristic of dogmatism. Some research by C. C. Anderson (1962) of the University of Alberta, however, shows that there is actually a decline in the amount of dogmatism during the teen years (see Figure 3-6). The relationship between dogmatism and cognitive ability is further demonstrated by Anderson's finding that the dogmatism of the more intelligent students declines more sharply than that of the less intelligent ones.

Erik Erikson, a psychoanalytic writer, has undertaken a classification of the way in which emotional stages of development are correlated with cognitive and social development (see Table 3-2). He identifies each stage of emotional development by the kind of psychosocial crisis which is likely to occur and which, if handled successfully, enables the individual to deal adequately with the kind of crisis and problem that he will encounter at the next stage of development. Each crisis is described in terms of both the favorable and unfavorable outcomes of dealing with the problems that occur. For example, during the play-age period, which occurs before the child enters school, the child may develop a degree of initiative about undertaking activities, or he

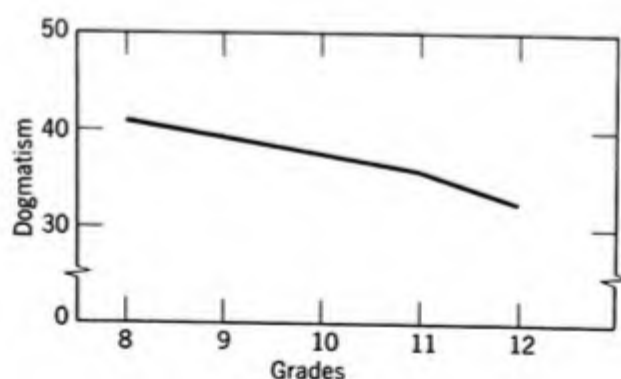


FIGURE 3-6. Decrease in dogmatism during the high school years. (Anderson, 1962.)

Educational Psychology in the Classroom

TABLE 3-2. Outline Presentation of Erikson's Eight Developmental Phases (after Erikson, 1959)

Periods	Psychosocial Crises	Relationships with	Experiences, Decisions, and Choices
Infancy	Trust versus mistrust	Maternal person	To get; give in return
Early childhood	Autonomy versus shame, doubt	Paternal person	To hold (on); to let (go)
Play age	Initiative versus guilt	Basic family	To make (= going after); to "make like" (= playing)
School age	Industry versus inferiority	Neighborhood; school	To make things (= completing); to make things together
Adolescence	Identity and repudiation versus identity diffusion	Peer groups and outgroups; models of leadership	To be oneself (or not to be); to share being oneself
Young adult	Intimacy and solidarity versus isolation	Partners in friendship, sex, competition, cooperation	To lose and find oneself in another
Adulthood	Generativity versus self-absorption	Divided labor and shared household	To make be; to take care of
Mature age	Integrity versus disgust and despair	Mankind; my kind	To be, through having been; to face not being

may learn to feel guilty about doing things on his own. The family is the model and the reinforcer in this kind of learning. Some families encourage and reward initiative; others look upon it with disfavor and may raise the question of whether the child is trying to be "different" or "better" than the other members of the family. The child who feels guilty about initiating activities is also likely to experience failures during the school age. Instead of becoming productive and learning to work together with classmates, he will be inclined to be plagued by feelings of inferiority and self-doubt, and consequently will withdraw from activities involving achievement or cooperation.

Adults tend to be far more concerned about the need to help children establish emotional controls than they are about helping them to find socially acceptable ways of *expressing* their emotions. Yet the two problems are inter-related. The child who does not have an adequate outlet for his emotions, who cannot tell others how he feels, is the child who will create difficulties for himself and those around him. This is why school teachers and administrators today think it important to introduce students to free, rather than rigidly prescribed, art experiences, to provide for a variety of supervised play-

ground activities, and to give students opportunities to talk about things that are important to them, either in group discussions in the classroom or in private conferences with counselors. We are just beginning to recognize that an important part of growing up is learning how to cope with the things that are troublesome, rather than pretending that they do not exist. Nor is emotional maturity entirely negative, for it is equally important to find ways to express positive feelings.

Physical Maturity. A parent once told me that the thing that caught his eye when he visited his son's fourth-grade classroom during Public Schools Week was the fact that the desks in the room were of different heights. The children had been divided into reading groups of six, two to a desk, and three desks had been brought together so that the members of each group were facing one another. It occurred to him that the working spaces were not very efficient, because some of the desks in each group were at different heights. He was wondering whether the variation was for artistic effect or whether it had happened accidentally, when the children all stood up to go out on the playground. Then he noticed that the children, too, were of different heights and that the shorter children were assigned to the lower desks and the taller children to the higher ones. He was quite impressed by the willingness of the school to adjust the furniture of the classroom to the height of each child. It was a marked contrast to the classrooms of his childhood, where all desks were of a uniform height.

Varying the height of desks is, of course, only one of the ways in which we have learned and are still learning to adjust and adapt the school program to the physical needs of children. Programs of recreation and physical education also are obvious attempts to meet the physical needs of youngsters by giving them opportunities to engage in vigorous play and to learn gracefulness and smooth hand-eye coordination. However, our chief concern with physical maturation is to see that the school program does not run counter to the normal physical needs of children. The greater restlessness of small children has led us in the primary grades, for example, to prescribe a shorter school day, punctuated with frequent recesses.

The school does not play as active a role in aiding students attain physical maturity, as it does in aiding them to attain intellectual, social, and emotional maturity. Normal physical growth and development will occur regardless of the content of the school curriculum. However, understanding of child and adolescent behavior is incomplete without some knowledge of patterns of physical maturation. Indeed, as we indicated in our discussion of early- and late-maturing adolescents, the development of emotional and social behavior is to a large degree paced by the rate of physical maturation. The physical

changes of puberty are accompanied by new interests and attitudes. Boys and girls who were figuratively at sword's points a few months earlier now find each other's company attractive and enjoyable. During this stage of development they become more conscious of their appearance and size. On the one hand, these changes make for self-consciousness and embarrassment, but on the other, they are used to support demands for greater freedom, independence, and autonomy. As the teenager attains the height and begins to take on the appearance of an adult, he also asks for more of an opportunity to play adult roles. Such demands seldom fail to put adults on the defensive, a position which makes it difficult to be objective and sympathetic in understanding the behavior in question.

Variations in maturational rates also create problems for the teacher, particularly during the junior high school years. The average girl reaches puberty approximately two years before the average boy, but differences in the age of attaining puberty may run as high as four years within the same sex. Thus a seventh-grade class may contain one or two boys who have already attained puberty and one or two who will not attain it for another four years. Figure 3-7 presents some of these differences in graphic form. Although these wide gaps in physical maturity are both obvious and important, we sometimes forget that they exist, particularly when we see the same children day after day. But what is even more important, we tend to forget that variations in physical maturity are related to and accompanied by variations in social, emotional, and intellectual maturity. It is therefore unreasonable to have the same expectations for a boy of thirteen who is short and slight and who speaks with a childish soprano that we have for a girl the same age who could pass for eighteen.

Although we have focused our attention on significant aspects of physical maturity during the last few paragraphs, what we have said should not be interpreted as indicating that patterns of physical development are more crucial than any other phase of development in determining the pace of intellectual, social, and emotional maturity. Physical changes are but one of the forces that have an effect on behavior, and, in a complex, highly socialized society like ours, other forces may have an even greater impact on behavior. The importance of the nonphysical factors is indicated by a study of the self-concepts of boys twelve to fifteen, conducted by Walter D. Smith and Dell Lebo (1956). Although the researchers found that social maturity was more affected by physical maturity than by chronological age as such, they also found that attitudes relating to interest in girls and emancipation from parents were more affected by chronological age. Smith and Lebo suggested that chronological age was a significant factor because older boys had more

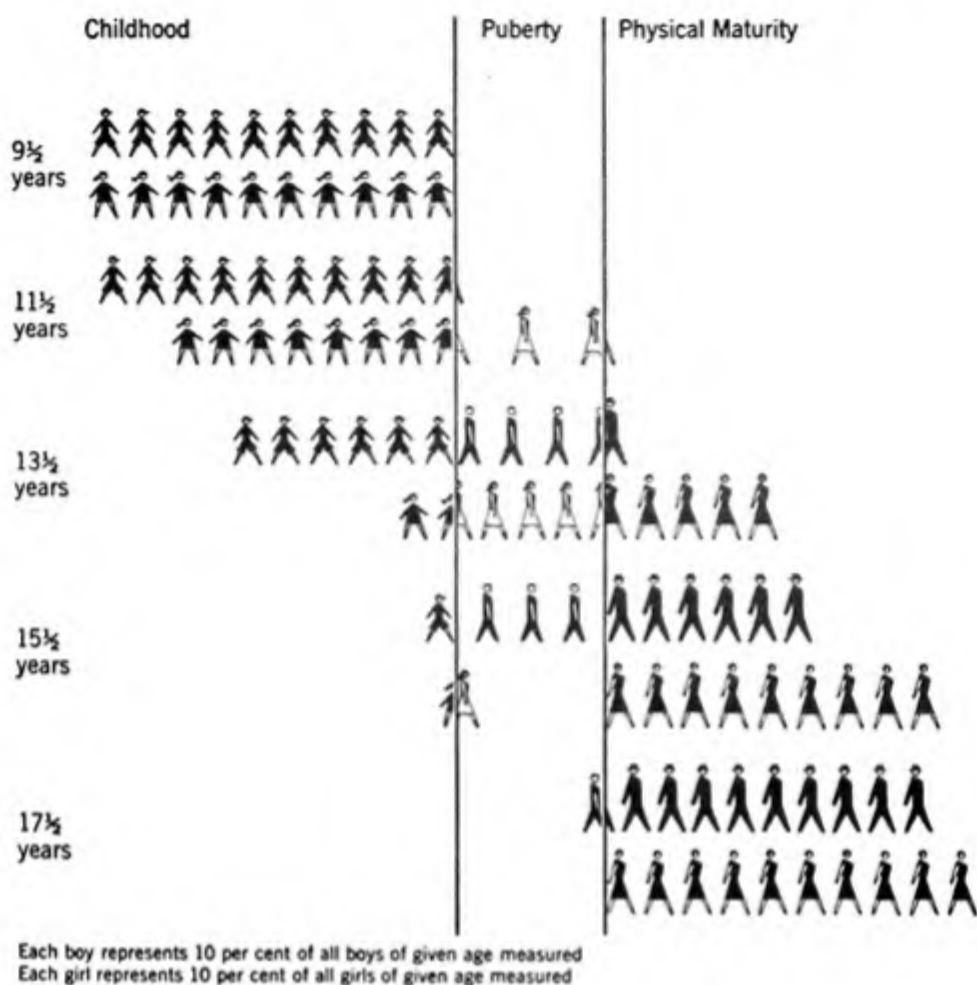


FIGURE 3-7. When boys and girls mature. (Keliher, 1938.)

opportunities for experience. It is very likely, too, that the groups in which boys participate have a significant effect on their attitudes and other forms of behavior. A number of studies of group behavior have shown that the expectations that group members have for one another may serve as very powerful forces in initiating, directing, or inhibiting behavior patterns.

Individual Patterns of Growth and Development. Thus far in this chapter, we have described some of the general trends and sequences of events that characterize the various kinds of maturity and maturation. There are, of course, individual variations that occur within the limits of these trends. This individuality is not, however, haphazard, since there tend to be basic consistencies that identify each individual's pattern of development, as well as his behavior in general. These consistencies appear even at birth. Beverly Birns (1965) found that newborn infants tended to respond not only to certain stimuli (soft tone, loud tone, cold disk, pacifier) with differing degrees of intensity, but that the intensity of their responses also tended to be con-

sistent over a period of several days. In other words, children who reacted sharply to a cold disk also tended to have strong reactions to pacifiers and the other kinds of stimuli that she presented.

Studies of such consistencies in behavior can produce important information for students of human growth and development and for teachers as well. If the behavior patterns of individual children tend to be consistent throughout the years of their development, it becomes possible to plot curves on a graph in order to determine whether a given child is developing at a slower, faster, or average rate. Some studies show that there is some tendency for children to maintain the same relative position when compared with the same group of children on the same measures over a period of time. For example, Samuel R. Pinneau and Harold E. Jones (1959) found that nursery school children tended to show consistencies over a period of time in emotional, antisocial, and attention-getting behavior, although they also found little or no consistency in a number of other aspects of behavior they studied. The very complexity of human behavior and the internal and external forces that bear upon it make the identification and isolation of consistent patterns most difficult.

The lack of consistency in individual patterns of development is also demonstrated by Figure 3-8, which shows the differences in reading development displayed by two girls of superior intelligence. Girl A and Girl B started

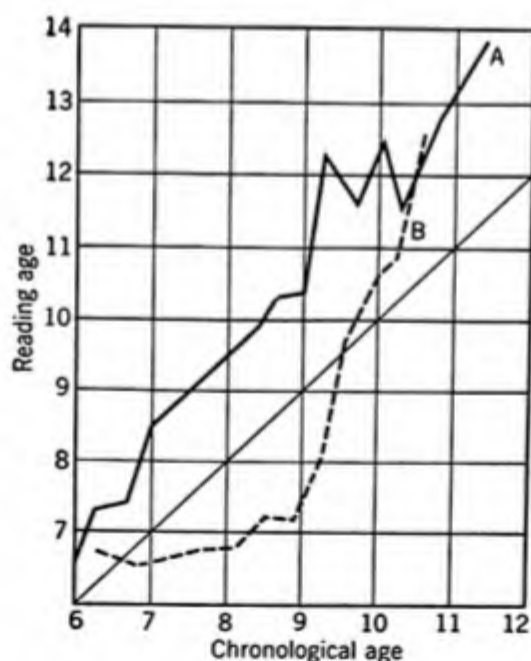


FIGURE 3-8. Contrasted patterns of growth in reading age for two girls who reached similar status at age eleven. (Olson, 1949.)

at about the same point in reading ability, but Girl A showed more rapid progress for the first three years. Then Girl B improved very rapidly and caught up with Girl A within the space of eighteen months. It is interesting and useful to learn that Girl A had entered the prepuberal stage of development when she was nine, that Girl A displayed more emotional and social maturity in nursery school than Girl B did, that Girl A's mother started to menstruate when she was fourteen, and that Girl B's mother did not start till she was seventeen.

But what about the fourth-grade teacher who had both Girl A and Girl B in her class? Both children were then nine years old. Girl A was some eighteen months advanced in reading, and Girl B was some eighteen months retarded. Who would have known, at that point, that both children would have a reading age of twelve when they were ten and a half?

What this comparison shows, among other things, are some of the risks teachers run in making predictions about children that are based on measurements made at any single point in time. Even a series of measurements can be misleading. Suppose that we had tried to predict the future reading development of Girls A and B on the basis of their growth in this ability through their eighth year. We would have been tempted to say that Girl A would continue to progress rapidly, but that Girl B, in spite of possessing above-average intelligence, would continue to lag. We would, of course, have been correct about our prediction for Girl A, but wide of the mark for Girl B.

Some critics of education have deplored the fact that all adolescents, irrespective of their level of intelligence, attend common high schools in most American communities, whereas in England each child is classified by examination at age eleven and assigned to one of three levels of schools in accordance with his examination grade and the recommendation of his elementary school. Unfortunately, the British system creates problems for the late-maturing child whose best abilities may not appear until age fourteen or fifteen. Cases like Girl B are not unusual; it is quite common for high school students who have been indifferent students in elementary school and junior high to show a belated awakening of interest in school matters, an interest that is accompanied by a dramatic increase in marks.

The difficulties and problems that beset our attempts to predict the behavior of students indicate some of the pitfalls to be encountered when we fail to make allowances for individual variations. The school is an institution that is interested in fostering all aspects of maturity, especially intellectual maturity, but maturity is a quality that each individual attains in his own way and at his own pace.

Accelerated and Retarded Development. When an adolescent enters the puberal cycle earlier or later than his peers, however, some rather interesting patterns of behavior are likely to appear. A number of studies conducted by the Institute of Child Welfare at the University of California in Berkeley have found that early-maturing adolescents tend to have an advantage over late-maturing adolescents. Mary Cover Jones and Paul Mussen (1958) found that early-maturing boys and girls are likely to possess a better degree of psychological adjustment than late-maturers. Margaret S. Faust (1960) found that early-maturing girls had more prestige in junior high school than late maturers. Mary Cover Jones and Nancy Bayley (1950) encountered similar patterns with early- and late-maturing boys. Early maturers were more likely to be student leaders and to show other evidences of popularity. Late-maturing boys tended to be more childish—animated, eager, and uninhibited—whereas early maturers were more relaxed and matter-of-fact. The researchers felt that these differences occurred because physically accelerated boys were more likely to be treated as more mature by adults and by other students, whereas late maturers were more likely to be treated as little boys and to behave accordingly. It would be easy to overgeneralize on the basis of these findings and to assume that early and late maturers behave as they do solely because of the differences in their physical development, but such a conclusion would miss the point that both age-mates and adults have different expectations for these more mature adolescents. Late and early maturers behave as they do partly in response to the attitudes of others, and these attitudes are in turn based to a large extent on the youngsters' physical appearance.

Although physical development can have a marked effect on the attitudes and expectations that others have for a given child, as we have shown above, it sometimes happens that the way in which others behave toward a child also has an effect on the developmental skills, such as the ability to sit alone, crawl, and walk, which are usually associated with degrees of physical maturation. A partial substantiation for this statement may be found in a study by Wayne Dennis (1960) who observed the behavior of young children in three institutions for foundlings and orphans in Tehran, capital of Iran. One hospital, which we shall call Institution A, had a population of 600 infants, three years and less in age, 90 per cent of whom had been there since they were a few weeks old. The ratio of children to attendants was about eight to one. The children in this hospital received little or no handling or personal attention; furthermore, they had no toys and no visitors. Institution B was established a year prior to Dennis's research. Its population consisted of children from Institution A who showed the greatest degree of develop-

mental retardation. However, children in Institution B received a great deal more attention than they did in Institution A. They were held while being fed and were supplied with toys. There was one attendant for every three or four children, and attendants received special training in modern child care. As Figure 3-9 shows, children in Institution B were developmentally far advanced over those in Institution A.

Dennis reported that when children from Institution A went on to an institution for orphans aged three and older, they eventually developed normal behavior. He attributes the differences in development depicted in Figure 3-9 to lack of learning opportunities experienced by children in Institution A, but the work of other researchers suggests that the degree of personal attention may also have been a factor.

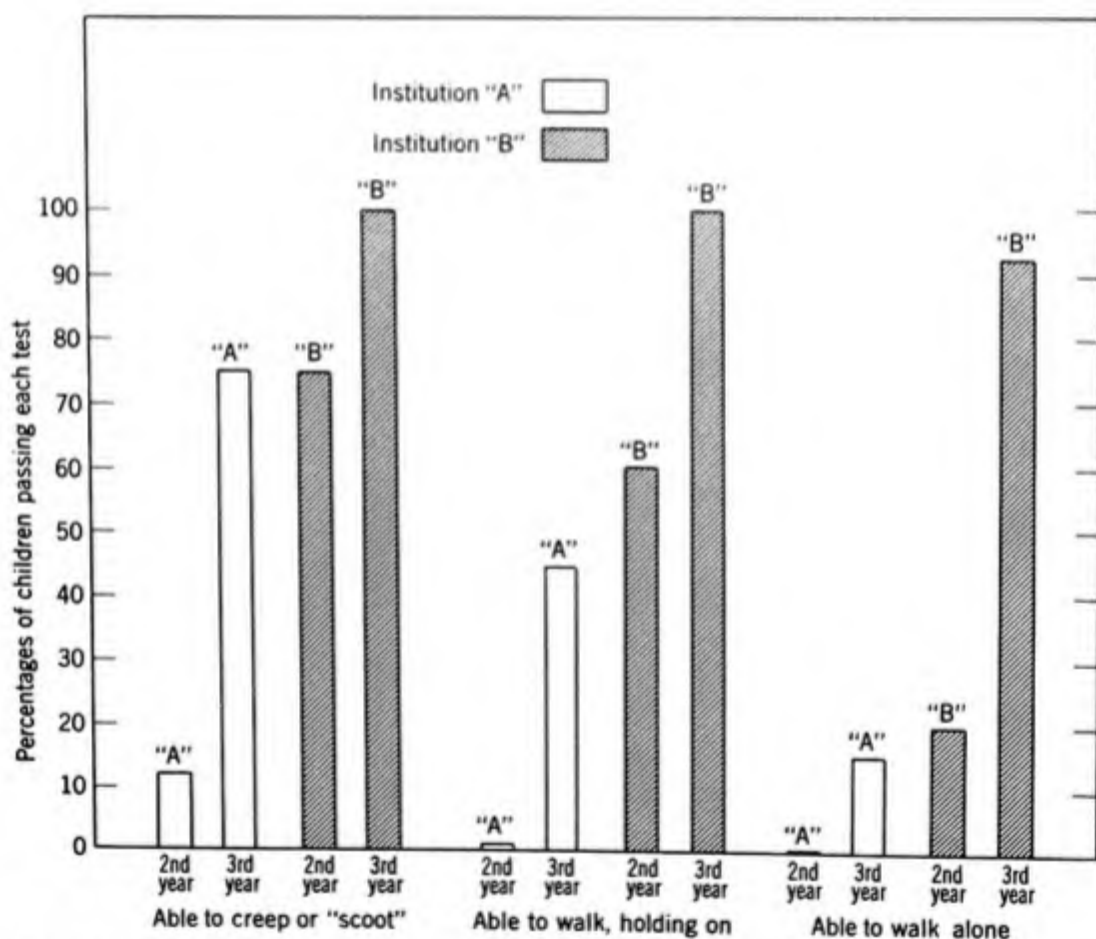


FIGURE 3-9. Percentages of children passing developmental tests during their second and third years in two different institutions; one in which they had no opportunity to play and received little personal attention (Institution "A"), and one in which they had opportunity to play and received much more personal attention and handling (Institution "B"). (Dennis, 1960.)

For instance, E. M. Widdowson (1951) found, in a study of children in two German orphanages shortly after the end of World War II, that the amount and kind of attention received was related to physical growth as measured by gains in weight. The original intention of the study was to determine the effect of a more adequate diet on the gains made in weight over the period of a year. During the first six months of the study the children received only the meager rations of food that were generally available in postwar Germany. During the second six months, the children in one of the orphanages received supplemental rations of food. It was expected, of course, that the children receiving supplemental rations would show marked gains in weight. However, the results did not turn out as expected. During the first six months when all children were on meager rations, the children at the first orphanage gained only one third as much weight as the children at the second orphanage, where the gain was close to normal. During the second six months, the children at the second orphanage where the gain had been normal were given augmented rations, but much to the surprise of the group making the study, the children gained less than they had before receiving the extra food. At the first orphanage, in the meantime, the children started to gain rapidly, even though they were getting the same meager rations as before. Investigation indicated that the probable cause of the paradoxical results lay in the behavior of the matrons who were supervising the homes. The matron at the first home during the first six months (when the gain was subnormal) was a harsh, unpleasant, domineering woman, whereas the matron at the second home, where the children were gaining normally, was a bright, happy, motherly person. At the beginning of the second six months, the pleasant matron of the second home left and was replaced by the harsh matron of the first home. The latter, in turn, was replaced by a third woman, who was a cheerful, motherly type of person. Hence the normal gains in weight occurred when the children were supervised by a cheerful, motherly type of matron, and the abnormally low gains occurred when they were supervised by a harsh, unpleasant, domineering matron. The implications of this study appear to be that when children's normal needs for love are thwarted over a period of time, their normal development is retarded.

Developmental Tasks. We have so far discussed two different schemes or schedules that can be used to describe human development and maturation: that of Piaget, which is concerned largely with cognitive functioning, and that of Erikson, which identifies a sequence of psychosocial crises. A third system that educational psychologists also find useful is based on the concept of "developmental tasks," as evolved by Robert J. Havighurst (1953) and his co-workers at the University of Chicago. A developmental task, as

Havighurst describes it, is a complex organization of problems that all individuals encounter in some form or other at certain stages in their lives. Unless they are able to meet the demands of these problems and resolve them adequately, they are likely to encounter difficulties with developmental problems at the succeeding stages in their lives. As a simple example, the learning of the fundamental skills of reading, writing, and calculating is a developmental task that all children must face during the elementary years. If they are unable to resolve this task adequately, they face difficulties in secondary school and in adult life. Not all developmental tasks are intellectual; some involve the development of attitudes and concepts. During the middle years of childhood, for instance, developmental tasks also involve learning skills used in games and simple tasks, building wholesome attitudes toward the physical self, learning to get along with age-mates, learning appropriate masculine or feminine roles, developing concepts necessary in everyday life, developing values, achieving some degree of personal independence, and developing positive and democratic attitudes toward social groups and institutions. During adolescence, developmental tasks involve attitudes, concepts, and skills relating to masculine or feminine social roles, relations with age-mates of both sexes, acceptance and use of the body, emotional independence of parents and other adults, assurance of economic independence, socially responsible behavior, values and ethics, and civic competence. Adolescents also need to select and prepare for an occupation, as well as for marriage and family life.

Aileen Schoeppe and R. J. Havighurst conducted research that appears to confirm the idea that inadequate solution of developmental tasks at one stage leads to difficulties at later stages. They compared the behavior of thirty boys and girls who seemed more than usually successful or unsuccessful from the time they were ten until they were sixteen, and found that inability to resolve tasks at an earlier age does seem to affect success at a later age. However, there was less consistency over the six-year span than over each of the two three-year spans, ten to thirteen and thirteen to sixteen, indicating that not all youngsters resolved their preliminary developmental tasks at the same time. There was also a tendency for some youngsters to "compensate" for weaknesses in some tasks by developing strengths in others. In other words, although there are patterns of development that are fairly consistent and apply to youngsters generally, there are also individual patterns of development. This means that teachers must not only be aware of general trends, but must also be alert to the needs of students whose developmental patterns are at variance with the general trend.

The role that the school must play in helping youngsters develop mature

behavior varies with different aspects of maturity and with different individuals. Sometimes the school must stimulate and encourage, sometimes it must guide, sometimes it must enforce limits and controls, and sometimes it must stand aside and not interfere. The attitude of "hands off" is perhaps the hardest role for the teacher to play, yet there are times when youngsters must be permitted to make mistakes or when they must be given freedom to try out some newly discovered ability. Deciding when to control and guide and when to stand aside is a difficult task, but on such decisions good teaching depends. There are no rules of thumb to guide the teacher in making such decisions—that is, there is none that is very effective. The ability to make such decisions depends on the teacher's own emotional and social maturity, his love of teaching, and his understanding of children.

SUMMARY

Although the evidences of growth and development in children are all around us, it is difficult to maintain proper perspective and to be properly aware of the progressive changes that are continually taking place. One way of observing and evaluating these changes is to compare them with the amounts and levels of growth and development that are more or less typical of children of the same age. A child whose level of development is up to expectation may be considered reasonably mature for his age. Similarly, other children may be considered immature or advanced, depending on their behavior.

The maturity of children may be considered from the standpoints of intellectual, social, emotional, and physical development. Actually, these factors are all interrelated to some degree. Schools have traditionally been preoccupied with developing intellectual maturity, unaware of its relationship to other aspects of maturity. However, there is a growing awareness that other kinds of maturity must be considered in developing an effective learning situation. Social maturity is to some extent basic to intellectual maturity, because it is concerned with the context in which intellectual maturity expresses itself. Emotional maturity is probably basic to both intellectual and social maturity, because the individual's behavior is so largely governed or conditioned by his feelings. Whether an individual learns at all depends, for example, on whether he is motivated to learn. Perhaps physical maturity is the most basic dimension of all, because it helps to set the pace for other forms of maturity.

One of the difficult problems in studying the development of children and adolescents is that of identifying the basic consistencies in motivational pat-

terns. Identifying such patterns is a necessary prerequisite to making predictions about the developmental trends and problems that lie ahead for a given child. However, the uniqueness of each individual's pattern of development raises some question about our ability to make hard and fast predictions as to the future behavior and performance of children.

At least three different systems are used by psychologists in identifying the various stages of development and maturation. Jean Piaget has devised a system that describes the way in which intellectual or cognitive development takes place. Erik H. Erikson's system covers the entire life span; its stages are characterized by the kind of psychosocial crisis that is likely to take place. Robert J. Havighurst has identified the various developmental tasks that individuals should master at each stage of their development. An important responsibility of the school is that of helping students deal with the tasks appropriate to their level of maturation and development.

SUGGESTED PROBLEMS

1. When the seventh-graders of Washington Junior High School held their class picnic, one of the girls brought out a portable phonograph and some records and tried to organize a dance. What kind of problems do you think she encountered? Why did she encounter them?

2. Although the children in Miss Martinelli's first grade appear to be healthy and without noticeable defects, she has decided to postpone instruction in reading for about a third of the class until the second semester. She will instead try to find other tasks for them to work at while she instructs the rest of the class in reading. Why has she made this decision?

3. When the police arrested Raymond for breaking into an elementary school one night and wrecking a classroom, the judge of the juvenile court referred him to the court psychologist for interviewing and testing. The report that the psychologist wrote contained a number of suggestions which the judge found helpful in deciding the action to be taken with Raymond. In his report, the psychologist referred to Raymond as "immature." Actually, Raymond was as tall and as heavy as other fifteen-year-olds, and the fuzz on his chin indicated that his beard was starting to grow. What did the psychologist mean by "immature"?

4. Look at Table 3-2, Erikson's eight developmental phases. What kind of problems might occur during early childhood, if psychosocial crises during infancy were resolved in terms of mistrust, instead of trust? What kind of problems would occur during adolescence if crises during the school-age phase were resolved in terms of inferiority, rather than industry?

SUGGESTED READINGS

- Baller, W. R., and Charles, D. C., *The psychology of human growth and development*. New York: Holt, Rinehart, and Winston, 1961.
- Dinkmeyer, D. C., *Child development: the emerging self*. Englewood cliffs, N.J.: Prentice-Hall, 1965. A general textbook in the area, emphasizing the development of the child's perceived world and his self-concept.
- Erikson, E. H., *Childhood and society*. New York: Norton, 1950.
- Erikson, E. H., Youth and the life cycle: an interview. *Children*, 1960, 7(2): 43-49.
- Flavell, J. H., *The developmental psychology of Jean Piaget*. Princeton, N.J.: Van Nostrand, 1963.
- Gabriel, J., *Children growing up: the development of children's personalities*. London: University of London Press, 1964.
- Johnson, R. C., and Medinnus, G. R., *Child psychology: behavior and development*. New York: Wiley, 1965.
- Kessen, W., ed., *The child*. New York: Wiley, 1965. A collection of papers written between 1693 and 1942 by such diverse figures as Locke, Rousseau, Darwin, Gesell, John B. Watson, Freud, and Piaget.
- Maier, H. W., *Three theories of child development*. New York: Harper and Row, 1965. Reviews the theories of Erik H. Erikson, Jean Piaget, and Robert R. Sears.
- McCandless, B. R., *Children and adolescents*. New York: Holt, Rinehart, and Winston, 1961.
- Mussen, P. H., ed., *Handbook of research methods in child development*. New York: Wiley, 1960. A series of papers reviewing the research in this field.
- Russell, D. H., *Children's thinking*. Boston: Ginn, 1956. Development of cognitive processes.
- Watson, R. I., *Psychology of the child*, 2nd ed. New York: Wiley, 1965.

4 The Learner and His Family



C. Hays from Monkmeyer

The two preceding chapters have been concerned with the drives, needs, and motives that are fundamental to all forms of behavior. These are the forces "inside" the individual, so to speak. An understanding of such internal forces, however, presents only a partial picture of why children behave as they do. In order to fill out this picture, the present chapter and the one that follows are concerned with the relationships children and adolescents develop with other people, especially the relationships with their families and their age-mates. Such relationships have an important effect on personality and behavior and enter to some degree into all learning experiences.

It is quite obvious, when we stop to think about it, that students do a great deal of learning outside the classroom. But sometimes we become so preoccupied with the task of bringing them along in social studies or reading or short division that we forget the larger learning situation in which they participate. We forget that they have accomplished a vast amount of non-academic learning before they enter school and that they continue to learn from nonacademic sources while they are enrolled in school and after they graduate. This chapter and the one that follows will to a large extent be concerned with social learning—the nonacademic learning that occurs when children and adolescents interact with their social environment.

The Family's Contribution to Learning. The family, not the school, provides the first educational experiences of the child. These experiences begin in infancy with the first attempts to guide and direct the child—to "train" him, as we say. Some of these attempts take place at a conscious level, but most of the time parents are not aware that they are attempting to influence behavior at all. Probably most of the training that they undertake deliberately and consciously is not as effective as that which is undertaken unconsciously. This is most especially true of attempts to train infants. Infants *do* learn, but not necessarily what parents think they are teaching them.

Educational Psychology in the Classroom

Mrs. Haskell started to toilet train her son Billy when he was six weeks old. Whenever she thought he was ready to urinate or defecate, she placed him on the toilet. Whenever he soiled his diapers, she scolded him; whenever he urinated or defecated in the toilet she praised him. This went on month after month. Gradually, Billy was soiling himself less frequently. His mother was pleased at his progress, although she wished that he would learn a little faster. Hence, she chided him more severely and occasionally spanked him when he soiled his diapers. Finally, when he was eighteen months old, he started using the toilet almost exclusively for bowel movements, but his bladder training was not complete until he was two years old. When this point was reached, Mrs. Haskell congratulated herself on having done so thorough a job of toilet training her son.

Actually, of course, Mrs. Haskell could have saved herself a great deal of bother, inasmuch as children establish bowel control on the average at eighteen months and bladder control at twenty-four months, regardless of whether the training is started early or late. The establishment of such controls depends on the maturational level of the child, and not when training is begun. Hence Billy was not learning how to control his elimination during the first year of his "education." The progress that Mrs. Haskell thought Billy was making during this period was actually a reflection of her own learning—that is, she was learning to recognize his cycle of elimination and was putting him on the toilet at times that coincided with it. He was not adjusting his physical processes to her demands, but she was adjusting her demands to the timing of his physical processes.

Learning That Occurs Incidentally. Although Billy did not learn to control his elimination during his first year, this does not necessarily mean that he learned nothing from this experience. Perhaps he learned that his mother was anxious about bowel and bladder functioning. Perhaps, because he was so often unable to meet her demands, he got the idea that his mother was disappointed in him. Or perhaps he got the idea that his mother would always be fluttering around him or hovering over him, anxiously looking, watching, waiting. Mrs. Haskell obviously was not aware that she was teaching Billy any of these things. On the conscious level, she thought she was teaching good habits of elimination, but below this level of awareness she was teaching Billy something about her attitudes toward elimination, dirtiness, and even toward life in general.

This kind of learning and teaching at different levels of awareness goes on all the time, in and out of school. Parents and teachers are always teaching simultaneously at different levels of awareness, and children are always learning simultaneously at different levels. Things taught or learned consciously may or may not be important and may or may not "stick." But what is taught and learned unconsciously is more likely to remain. You can test

this by thinking back over your own school career. You probably have forgotten most of the facts you learned in high school (research indicates that most of what is learned formally is forgotten within a few months), but you are much more likely to remember the teachers you had and the kind of persons they were, particularly the attitudes you had toward them and they had toward you.

And so it is with learning that takes place in the family. Whatever it is that a child learns during the preschool years, he most definitely learns what feelings his parents have toward him and toward life in general. And these feelings are the basis for each child's concept of himself, the world, and his place in the world. A child who is despised learns to despise himself; a child who is accepted is likely to develop attitudes of self-acceptance.

Basic values are likely to be learned during these early years. Such values enter into every phase of life experience and include attitudes toward success, competition, problem solving, self-expression, and many other areas of life, as well as the homely virtues of honesty, industry, cooperation, obedience, and the like, depending on what kinds of behaviors are reinforced by parents. A mother who always responds to her child's needs for affection, but ignores (and indeed may be unaware of) his attempts at problem solving, tends to reinforce affection-seeking behavior (emotional dependence), but not intellectual or cognitive striving.¹ A child is typically quick to note to what parents turn their attention, and he thus learns what it is that parents value. Inasmuch as parents are the models for behavior during the preschool years, it is hardly surprising that most children take on their values. We should remind ourselves here that we are referring to the values that are implicit in the parents' behavior, which may not be the ones that parents subscribe to publicly. Parents may be shocked to learn that their fourth-grade child is two years retarded in reading, yet inquiry will show that the parents' own reading is confined to newspaper headlines, comics, and the sports page, and that their recreation is limited to television, movies, radio, and chatting with friends and neighbors. Where reading has little value for parents, it is likely to have little value for children.

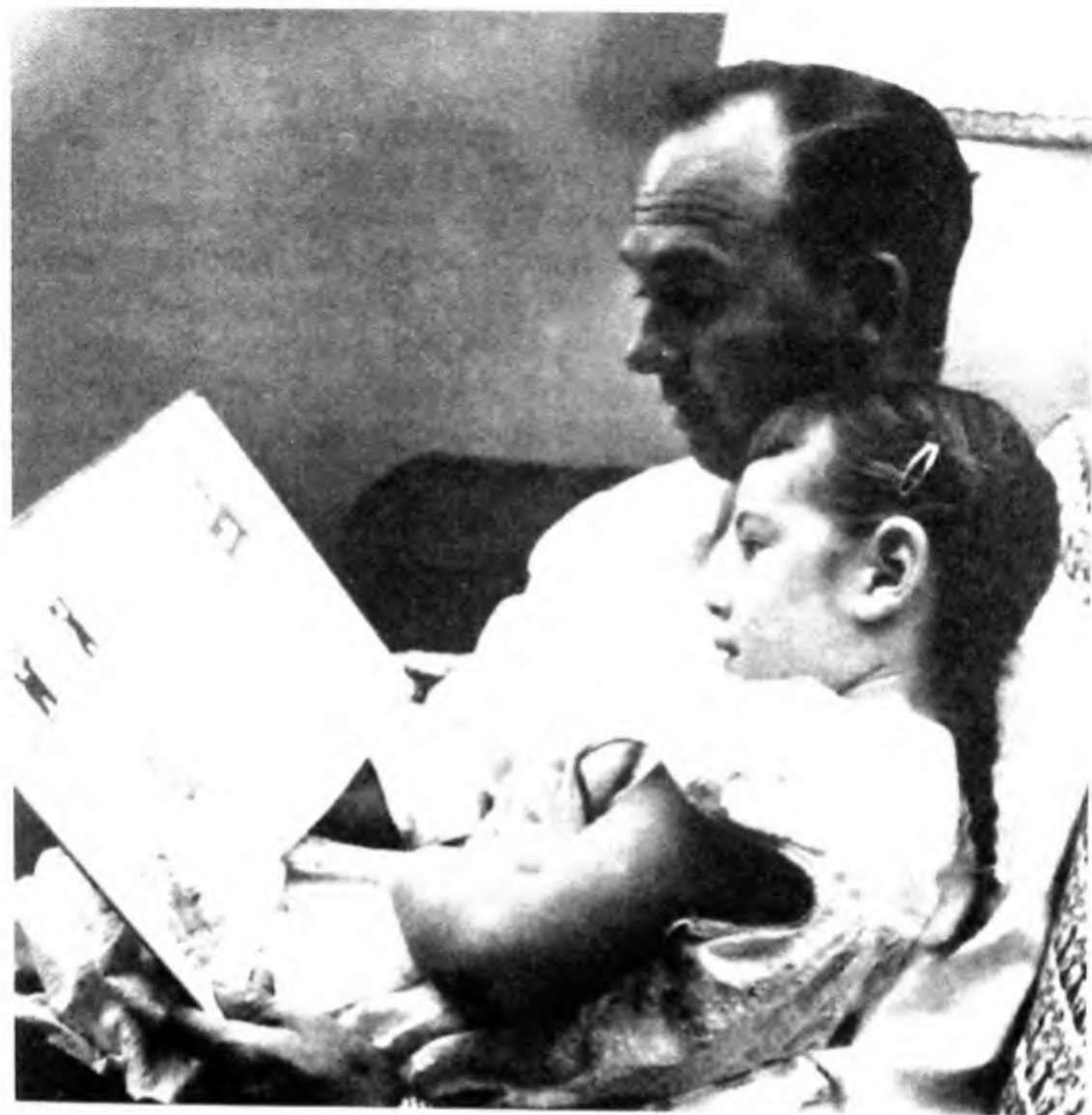
What we have been describing in the foregoing paragraph is the usual trend—namely, a close correspondence between parents' values and children's

¹ Albert Bandura and Aletha C. Huston (1961) found that nurturant behavior (behavior characterized by attentiveness and warmth) led children to copy the mannerisms of the adult who was teaching them to do the problem, but these children were not more successful in learning the task that she was teaching them than were those whose teacher was cool and detached. In other words, a loving relationship seems to lead to an emotional kind of identification, but does not in and of itself stimulate cognitive development. Something more seems to be needed.

values. There are, of course, numerous exceptions. Some children are more responsive to reinforcement; some are less so. Some are vigorous and assertive; some are passive and apathetic. The level of energy seems to be quite important. Samuel Karelitz and others (1964) studied the crying of infants shortly after birth and found that those who cried most lustily were likely to have higher IQs three years later. If lusty crying can be considered to be an index to energy and vigor, it would appear that the energetic child has a head start intellectually. How parents *react* to crying and other dimensions of the child's behavior are, however, of the utmost significance in determining what the child becomes. All things considered, there is much to be said for the prescription for optimum child care: "Much love and a home full of books."

Similarities and Differences in Personality. It is a truism that we are more aware of the ways in which we differ from others than we are of the ways in which others differ among themselves. Actually, there are similarities and differences among all of us. Each of us is to some extent like *all* other persons, like *some* other persons, and like *no* other persons (Kluckhohn and Murray, 1953). Our similarities and differences are partly inherited and partly learned, but inheritance and learning give us only part of the picture. What happens is that inherited traits and learned behavior become organized around the concepts that we develop of ourselves and our environment. From the earliest years of childhood, our perceived self becomes a starting point for learning and experiences that form the basis of the kind of person we eventually become. Nor does this self of ours develop independently of our social environment, for it is composed to a large degree of the "reflected appraisals of others," to use a phrase coined by Harry Stack Sullivan (1947). In other words, our "pictures" of ourselves (our self-concepts—who we are) are formed to a great extent from what others think of us. As we indicated above, the family not only gives the child its first basis for understanding the world, but it also provides the raw material from which the self and the basic framework of personality are made. As a result of his early experiences in family life, the child learns how to satisfy his basic needs, how to cope with and avoid anxiety, and what kinds of satisfactions are available and appropriate. These early learnings may be revised in accordance with later experiences, but the basic attitudes toward others and the basic approaches to the problems of life usually remain with us throughout our lives.

In Martin Rust's family, the dictum that "little children should be seen and not heard" had been tossed into the ash can. When Martin was a baby, his brothers and sisters dominated the conversation at the dinner table, and, as he grew old enough to join in, he added his words to the rest. Martin's parents sometimes



National Education Association—Carl Purcell

The family plays a key role in determining basic patterns of attitudes and values that children learn during the early years of their development and that will to a large extent characterize their personality development and relations with others throughout their lives.

objected to the noise, saying that dinner should be a quiet affair, a time to collect one's thoughts. But they never made a serious attempt to enforce silence, because they felt it even more important for children to have their say. As the children grew to adolescence and adulthood, they continued to be outspoken individuals. Martin himself had little of the usual difficulty with shyness during adolescence and cheerfully dominated meetings and class discussions in high school and college. On the other hand, older people often complained that he did not have as much respect as they felt he should for people in positions of importance and

authority. Those of his teachers who made much use of class discussion liked to have him in class, because he could always be depended upon to get a discussion going. Teachers who used lectures found him objectionable, because he was inclined to interrupt with questions and comments.

Being outspoken or reserved is, of course, only one dimension of personality, only one sort of approach to the problems of life, and there are countless other ways in which we differ from one another and resemble one another that have their bases in our early experiences.

The Family Situation. One of the commonest approaches to the study of children is that of studying the family situation. The cumulative school records of students are full of answers to such questions as the following. How many children are in the family? Where does this child appear in the birth order—oldest, middle, youngest, or only? Has the family moved a great deal, or has it lived at one address since the child began school? What is the father's occupation? Is the mother employed? How much schooling do the parents have? Do grandparents, other relatives, or boarders live in the home? Is this a home broken by divorce, death, or the prolonged or frequent absence of one or both parents?

School people ask such questions because they are looking for clues that will help them understand the student's general behavior and particularly his behavior as a learner. A student's ability to learn is likely to be affected by the presence or absence of marked changes in the home situation. Many children, particularly during their younger years, get tense, upset, and even behave in an immature fashion following the birth of a brother or sister. Sometimes the disturbance is the result of family moves. Americans move more frequently than any other national group: one family in five moves annually, and of those families who move, one third cross county lines (Hill, 1960).

Anyone who has worked with youngsters is aware that behavior problems and broken homes go together. When Norah Clancy and Faith Smitter (1953) compared the family situations of children classified as "emotionally disturbed" with those of other children, they found that 36 per cent of the emotionally disturbed children came from broken homes, as contrasted with only 11 per cent of the other children. There is a danger in assuming, however, that behavior problems are due solely or even primarily to the fact that the home has been broken. The lower the socioeconomic condition of the family, the more likely it is to be broken by divorce or desertion. Persons with grammar school education are twice as likely to divorce than are married couples with college education, and they end their marriages nine years earlier, on the average, than college people who obtain divorces (Hill, 1960).

For a variety of reasons lower-class families are less able to cope with the stresses and strains of life; hence they experience a great many more problems than do middle- and upper-class families.

Nevertheless, there is little doubt that broken homes, as such, produce more than their share of problems. Harlan Reyburn (1951) compared 125 students from broken homes with 125 students from intact homes, matching the groups carefully on the basis of IQ and the occupation of parents (thus virtually eliminating social class as a factor). The two groups turned out to be equally matched when it came to school achievement. However, the children from broken homes reported 50 per cent more problems of adjustment when they filled out the Mooney Problem Checklist, and in the portion of the questionnaire dealing with home and family they checked three and one half times as many problems. They had many more problems in school, too, as Figure 4-1 shows.

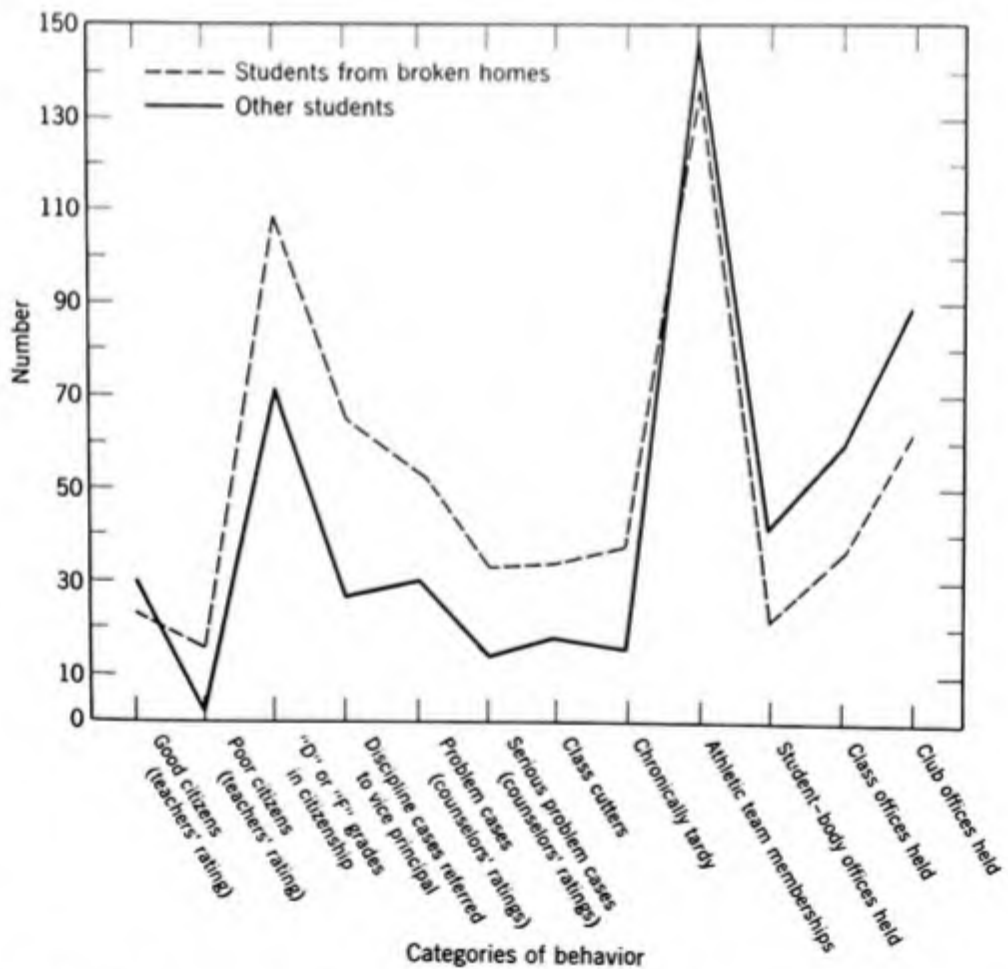


FIGURE 4-1. Comparison of school behavior of 125 high school students from broken homes with that of 125 students from intact homes. (Reyburn, 1951.)

Educational Psychology in the Classroom

The psychological effect of parental absence was demonstrated in an interesting way by a study conducted in rural Trinidad by Walter Mischel (1958). He asked children, each of whom had performed a small task for him, if they would like to be rewarded with a small candy today or a larger candy next week. None of the children whose father was not present in the home were willing to wait a week and receive a larger candy. Thinking in terms of the future—being “future-oriented”—calls for considerable psychological security and emotional maturity. The eight-year-olds in Mischel's study, for example, were more willing to postpone rewards than were six-year-olds. The child from a broken home is less likely to have the emotional security required to think in terms of future rewards. This point is particularly significant in view of the fact that the rewards of education are seldom immediate. Education is a future-oriented process. The student must have some degree of confidence and optimism that he will obtain some future reward or goal if he is to tolerate the tedium and the little frustrations that inevitably appear at various stages in learning. There are those who argue persuasively that classroom learning would be a much more satisfactory experience, particularly for children from culturally impoverished homes, if the rewards could be more immediate and obvious, rather than somewhere out in the future. There is no doubt that many children are unable to participate in the educational program as it is ordinarily constituted, and that some kind of immediate reinforcement must be supplied if they are not to be bypassed by the curriculum. But every child who is successfully involved in the work of the school eventually comes to accept the future orientation that is an intrinsic part of education in an urbanized and industrialized society like ours.

Mischel's study poses another type of problem for teachers who work with children from broken homes: the question of whether such children can trust adults. Inasmuch as the success of teachers depends on developing a relationship of mutual trust with students, the child or adolescent who cannot trust adults presents a difficult problem.

We are giving particular stress to the problems of students from broken homes, because there are so many of them in school. About one child in eight is from a home that lacks one or both parents. In some schools, the number of students from broken homes is phenomenally high. In the Reyburn study that we just cited, 40 per cent of the students came from broken homes.

Facts regarding the home situation can obviously be very helpful in understanding the behavior of students, but caution is advised against unwarranted assumptions. For instance, the employment of mothers is commonly

believed to have a negative effect on the emotional adjustment and general behavior of children and youth. Such homes are sometimes regarded as "partially broken," because of the mothers' absence. Furthermore, questions are raised as to whether mothers who spend so much time out of the home really "love their children" or are "shirking their duties and responsibilities." Inasmuch as about 40 per cent of the mothers of school children are employed part-time or full-time outside the home, this fact could constitute a major threat to the emotional health of children (National Manpower Council, 1957). But research findings fail to show that the employment of mothers is necessarily a bad thing. F. Ivan Nye (1951, 1952) found that relations between adolescents and their parents were actually better if the mother worked part-time than if she worked full-time or not at all. Another study shows that in homes where the mother works, there is a greater sharing of rights, privileges, and duties (Siegel and Haas, 1963). McCord, McCord, and Thurber (1963) found evidence to suggest that working mothers in stable lower-class homes were less punitive and less overprotective than lower-class mothers who did not work. In *unstable* lower-class homes, employment of the mother was associated with overdependency and delinquency.

The studies on the effects of broken homes and employed mothers show, among other things, how dangerous it is to overgeneralize on one or two facts. The fact that a child comes from a broken home or a home in which the mother works is only one item among the many factors that might influence or condition his behavior. Such a fact, furthermore, may not be very significant. Nye (1958) found, for example, that the degree of happiness in the home was a very important factor in determining whether adolescents would become delinquent. Unhappy intact homes, he found, were more productive of delinquency than broken homes. Although the absence of one or both parents may be a critical factor, what is even more important is the emotional climate of the home, which is conditioned not only by the attitudes parents have toward children, but also the feelings they have for each other. A child's sense of security is intimately linked with the attitudes and feelings of parents, even when the attitudes do not concern him directly. In one study of the fears of preschool children, R. R. Hagman (1930) found a high relationship between the fears expressed by mothers and those expressed by their children.

The Emotional Climate of the Family. One aspect of the interaction between children and parents is what psychologists term the "emotional climate" of the family. Emotional climate may be thought of as the generalized attitudes and feelings that prevail in the family group.

Educational Psychology in the Classroom

The members of the Case family are always bickering, yet underneath they feel a deep attachment for one another. During times of crisis, they work effectively together as a cooperative team.

The morale in the Spencer family is chronically low. No one expects things to turn out right. Father cannot hold a job, Mother has been in the hospital twice for an obscure stomach ailment, and Sister is on the point of being sent to an institution for the mentally retarded. No one in this family bothers about carrying out or even making plans. The typical mode of conduct is to take what you can while you have the chance, regardless of who gets hurt. There is an underlying bitterness that colors the entire relationship among the members of the family.

The members of the Kohl family spend most of their time doing hard farm work. They do not talk very much, except to evaluate what they have done and to plan the work that lies ahead. The need to work hard and keep the wolf from the door commands most of their attention and draws them close together. At the present time, they are beginning to find more leisure time than they had formerly and are spending it in church work. This helps keep them together, because it enables them to share the same experiences and to maintain a feeling of closeness.

The attitudes, feelings, thoughts, and general behavior of the children from these three family units will reflect the emotional climate prevailing in their homes. If a child gets a sense of security from his home, such a feeling will enable him to cope more adequately with the tasks of classroom learning and other problems he encounters at school, but the more the home climate is characterized by such qualities as punitiveness, disorganization, or extreme rigidity, the more likely it is to produce problem behavior in children.

The classic study of the effects of psychological climate on the behavior of children was conducted by Kurt Lewin, Ronald Lippitt, and Ralph K. White (1939) during the 1930s. In general, the investigators found that the behavior of children was markedly altered when a change in the adult leadership of their group was accompanied by a change in psychological climate. The three kinds of climate—autocratic (much control and direction), laissez faire (no control or direction), and democratic (cooperative relationship between leader and group, with the leader more of a collaborator than a director)—characterize three basic modes of group leadership. This study has not only directed the attention of psychologists and educators to the importance of psychological climate in the classroom, but it has also stimulated a great deal of research into the emotional climate of the family and its effect on the personality and behavior of children.

Democratic and Authoritarian Homes. Many of these research studies have been concerned with comparing the behavior of children from homes where the atmosphere was democratic (that is, where there was an emphasis

on tolerance, understanding, and "permissiveness") with that of children from homes where the atmosphere was authoritarian (that is, where there was an emphasis on unquestioning obedience and conformity to parental wishes). One such study is that conducted by Goodwin Watson (1957), who set out to compare the behavior of fifty children brought up in good, loving, but strictly disciplined homes, with that of fifty children brought up in good, loving homes where parents were especially permissive. He was somewhat surprised when, contrary to his expectations and to popular belief, he was unable to find fifty homes where the atmosphere was sufficiently permissive for the purposes of his study, even after he extended his study an extra year. He had no difficulty in finding strict homes; with very little effort he found three times as many strict as permissive homes in the upper-middle-class community in which his study was conducted. He eventually decided to conduct his study with thirty-four children available to him from permissive homes and forty-four from strict homes. The children were studied through the use of psychological tests and a series of specially graded tasks. In general, he found that children from permissive homes, when contrasted with children from authoritarian homes, tended to be:

1. More self-reliant and independent, and more inclined to show initiative.
2. Better able to engage in intellectual activity under difficult conditions.
3. More cooperative and more popular with other children.
4. More friendly and less hostile toward others.
5. More spontaneous, original, and creative.

Incidentally, Watson found no differences between the two groups of children with respect to self-control, anxiety, passivity, and happiness.

As part of a long-term research by the University of California Institute of Human Development of a group of children (the Berkeley Growth Study), Nancy Bayley (1964) compared the kind of behavior children exhibited at various points in childhood and adolescence with the way in which their mothers had treated them when they were younger, and found a number of consistent patterns. In general, strictness and punitiveness on the part of mothers during early years of childhood were associated with a lack of friendliness, attentiveness, and general facility on the part of the child during later years. On the other hand, the willingness of the mother to treat the child as an individual, to let him make some of his own decisions, and to express love toward him were associated with later appearance of positive behavior on the part of the child. Figure 4-2 shows how democratic and loving behavior on the part of mothers during the first three years of the children's life was positively related (that is, favorable) to cooperative be-

Educational Psychology in the Classroom

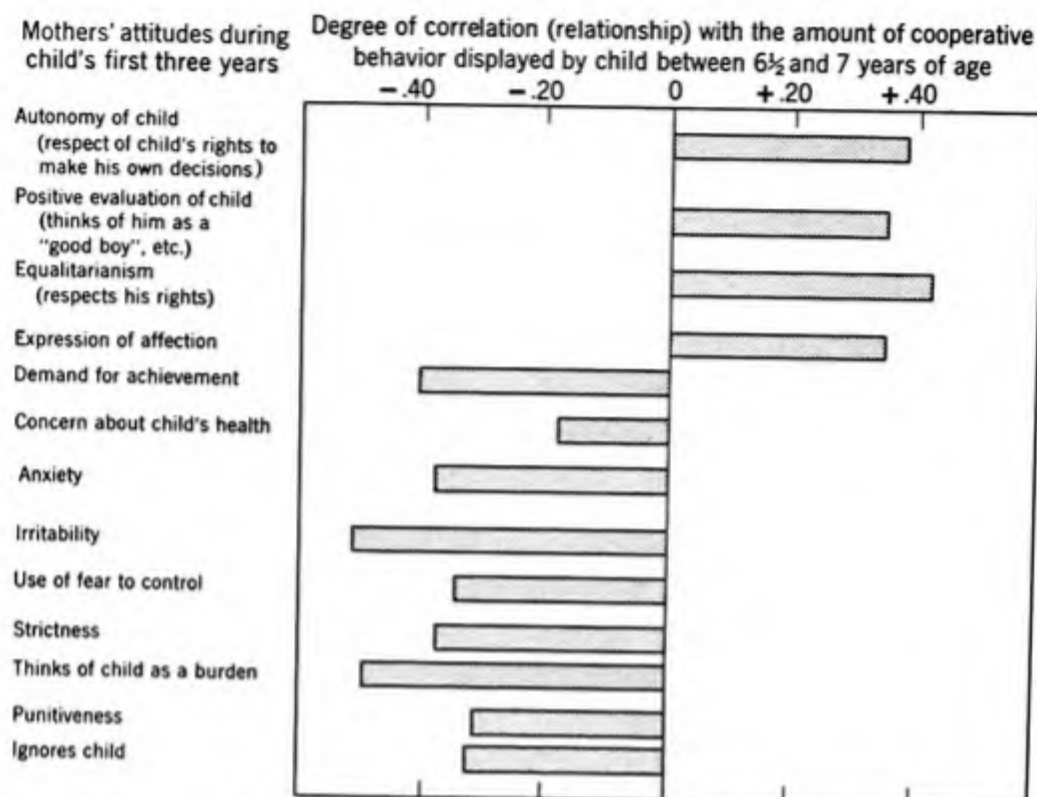


FIGURE 4-2. Coefficients of correlation (degrees of relationship) between mothers' behavior toward their sons during the first three years of life and the amount of cooperative behavior displayed by sons between 6½ and 7 years of age. (Bayley, 1964.)

havior on the part of their sons four to six years later, and how strict and punitive behavior was negatively related (that is, unfavorable) to such behavior. Jerome Kagan and Marion Freeman (1963) compared the IQs of children at various ages with the kind of treatment they had received from their mothers. Their findings were generally consistent with those of Bayley, in that mothers' coerciveness, restrictiveness, and severity when children were between two and four years of age were associated with declines in their children's IQ at ages 3½, 5½, and 9.

Robert F. Peck (1958) reported on a study of the effect of parental discipline and family characteristics on the personalities of adolescent children. He found that families that were characterized by a high degree of mutual trust and approval between parents and child also tended to be families that were democratic—families, that is, in which children shared in the making of family decisions. When the behavior of children from such families was rated by objective observers, they were found to be more emotionally mature, more concerned about the welfare of others, more reasonable, more emotionally stable, less hostile, more spontaneous, and more friendly as contrasted

with children from less democratic families. Some of the reasons why children from such homes are inclined to be better adjusted emotionally and socially is suggested by another study conducted by Malcolm M. Helper (1958), who found a relationship between the degree of self-acceptance expressed by adolescents and the degree to which their parents accepted and approved of them. Because self-acceptance plays an important part in emotional security, its presence or absence is a matter of some concern to those who study child behavior. Evidently those children who live in families where the atmosphere is one of chronic disapproval and criticism, tend to accept this negative evaluation of themselves. Helper's research also indicated that the attitudes of fathers were especially crucial in determining the degree to which children were able to develop feelings of self-acceptance.

Individual Patterns of Behavior. Although it is relatively easy to draw sweeping and obvious conclusions regarding the behavior of a child at school and the conditions that we assume are prevailing at home, the obvious conclusions are not always the most valid. Human behavior is an exceedingly complex phenomenon, and it is difficult to determine, without careful study, what the important factors really are in a given child's behavior. As an example, let us consider the case of a boy of ten who refuses to stay in school. At the earliest opportunity, he runs home. One obvious explanation is that he does not like school. Perhaps his parents have prejudiced him against school, or perhaps they are too indulgent, permitting or encouraging him to avoid his responsibilities. Or perhaps his mother is overprotective, is afraid that he will be mistreated at school, and communicates this anxiety to him in some way or other. These are the kinds of conclusions we might reach if we tried to account for the behavior of a child solely on the basis of appearances. Subsequent investigation disclosed, however, that none of these assumptions was anywhere near the truth. According to G. H. J. Pearson (1952), the psychiatrist who investigated this particular case, the boy's parents quarreled continuously, and his mother almost daily threatened to pack up and leave. Consequently, the boy never really knew, when he left the house in the morning, whether he would find his mother still there when he returned. When in school he kept wondering whether she had gone, and when his anxiety became unbearable, he ran home to assure himself that she was still there. When we remember how important and how basic the need for love is, it becomes understandable how a child might become so worried about his mother's threats to leave that nothing else would seem important. Hence he would repeatedly run home in spite of the scoldings and punishment he experienced at school and at home.

There is still another difficulty that faces the person who is trying to find

out something about a student's home situation. Many students are reluctant to discuss home problems because they feel that what they say may get the family into trouble, because they are embarrassed at being the subject of probing questions, or because they are not consciously aware what the real difficulty is. Dorothy Lee (1955), an anthropologist at the Merrill-Palmer School in Detroit, tells of a girl of Greek background who showed up in school with a large bruise on her arm. She was questioned at length by her physical education teacher until, under great pressure and with great agony, she broke down and confessed that her older brother had bitten her. The teacher then tried to force her to charge her brother with assault and report him to the juvenile court. Lee points out that turning a brother over to the police would run counter to the loyalties of any child, but a Greek child would consider it one of the worst of all possible crimes. The interest of the teacher in the welfare of the girl was certainly to be commended, but she did a bungling job of dealing with a situation that called for tact, empathy, and delicacy, as well as an understanding of the cultural background of the child.

When behavioral problems become acute, as they were in the case of the boy who always ran home or as they may have been in the case of the Greek girl, youngsters are sometimes able to discuss their problems with a person who somehow has been able to earn their trust and confidence. All too often, however, teachers or principals make the unwarranted assumption that they automatically have the confidence of children. Since *they* see themselves as sympathetic and trustworthy, they assume that children also see them in this light. Actually, a better practice is to refer such problems to the school psychologist, school social worker, counselor, or similarly trained person, assuming, of course, that one is available. In many school systems, to be sure, specially trained persons are not available, and an undue burden of responsibility is placed on the shoulders of teachers and administrators when they have to cope with complex and baffling psychological problems.

The Family as an Interpreter and Transmitter of the Culture. To some extent, the emotional climate of the family reflects the prevailing attitudes of the social culture of which the family is a part. Thus we would expect American family life to emphasize competition, progress, and self-assertion, whereas the family life of certain Southwest Indian tribes, like the Hopi and Zuñi, would emphasize an approach to life that would be less individualistic and more group-centered. As American children grow into adolescence, it is expected that they will question some of the ideas held by their parents, whereas German children are expected to accept parental beliefs at face value. This does not mean that American parents enjoy having their children dis-

agree with them, or even that they encourage such differences with any deliberate or conscious intent. Yet when we compare family life in America and Germany, we are struck by the greater freedom for self-expression and self-assertion enjoyed by the American child. Hence we conclude that there is something about American family life that encourages children to express differences of opinion. Very likely American children behave in this way at least partly because their parents feel that freedom of speech is essential.

From an educational point of view, the family plays the key role in introducing or transmitting the values of the culture to the child. It is through their participation in the daily events of family life that children are expected to learn to value property, law, and order; to respect the rights and feelings of others; to avoid bad company; to be loyal to family and country. To be sure, the school is expected to continue such education, but it performs this function best when it can amplify and enlarge upon the education already begun in the family. And, of course, the family continues to bear the major responsibility for what we call moral education long after the child has started school.

Cultural Patterns. Although there are some fairly basic similarities that characterize most American families, there are some important differences. Each family varies the basic pattern according to its individual needs and tastes, some more, some less. But between the individual variations and the basic pattern, there are some family patterns which are typical of certain groups—subcultures within the larger American culture. Inasmuch as the students in a typical classroom come from a variety of these subcultures, it is important to be aware of some of their characteristics.

Some of the most obvious variations on the basic pattern are the subcultures that develop among groups of people who still have strong ties to other lands—people who have not completely assimilated the American culture and who have not been assimilated by it. The Greek girl referred to a few paragraphs back is from such a family. Such people are, psychologically speaking, in a marginal position. They are out on the margin of the culture that they left behind and on the margin of the American culture. They are, in effect, "between cultures." Although they may think of themselves essentially as, say, Greek, Italian, or Latin American, they actually think, feel, and act differently from those that they left behind. Their attitudes and behavior patterns may in some ways be quite American, but they differ markedly from those of native-born Americans. When their children "talk back," as so many American children do, they are far more enraged and upset than the typical American parent. Nor are they able to accept the higher status that children today enjoy in this country, as contrasted with other countries. In an analysis

Educational Psychology in the Classroom

of child-rearing practices over the two thousand years, the late sociologist, J. H. S. Bossard (1954), pointed out that it is only recently (and almost exclusively in America) that children have been assigned status that is in any respect equal to that enjoyed by the adult members of the family, and this has come only within the last generation or so. Bossard pointed out that even though we may be inclined to gloss over or obscure the status of children in former years, the plain fact is that they were often systematically and consistently exploited by their elders. During the Colonial Period in American history, children had no rights, except as they happened to fit the needs of their elders. Bossard continues:

Today the child is regarded as a human personality in a peculiarly vital stage of development. He is a coequal personality in the emerging democracy of the family. The guarding of this personality is the child's precious right, and the dangers that threaten it are recognized social problems; the development of this personality is his most precious opportunity, and the furtherance and guidance of that development are the concern of his elders.



"Listen, I may send YOU to bed!"

Hank Ketchum, Post-Hall Syndicate, Inc.

(Reproduced by permission.)

The democratic relationship that tends to be characteristic of child-parent relationships in America can at times have some rather annoying side-effects.

Such attitudes are unfamiliar and disturbing to immigrant parents, coming as they do from cultures where child rearing is conducted along more authoritarian lines than it is in America. Children in other countries live in a great deal more fear of their parents than American children do. Harold and Gladys Anderson (1956) asked children in a number of different countries to supply an ending for a story about a boy who had been sent by his mother to buy some wieners but who had lost half of them on the way home through carelessness. Children in Germany, Mexico, and Finland were more inclined to suggest, in their endings, that the boy should not tell the truth but should tell a lie, whereas children in the two American cities included in the study, Birmingham and Knoxville, were more inclined to suggest that he not tell a lie but tell the truth instead. The implication of this research is, of course, that American children are more likely to expect their parents to treat them with acceptance and understanding in spite of their misdeeds, whereas children from other countries are less likely to have this expectation.

Although permissive attitudes toward children are attracting a great deal of adverse comment and criticism today, they are not entirely a recent innovation in this country. Visitors to America a hundred years ago were shocked by the amount of freedom granted children by their elders. Frances Trollope, mother of Anthony Trollope, commented in 1832 on the "total want of discipline" in American families, and another visitor in the 1870s said that the new commandment in America was: "Parents, obey your children in all things" (Olden, 1952).

Here is another difference between the American culture and the culture of the Old World. When American children grow to adulthood, they are expected to fend for themselves, to set up separate households, and to go into business and occupations of their own choosing, into fields that may be quite different from those of their parents. Families in the Old World and even in Latin America stay much closer together. Grown sons are expected to go into the family business; in many countries, a married son brings his wife to the family home and raises his children there. Family loyalty is a very important virtue in the Old World; the individual looks to his family to protect him against the hazards of life, whereas in America, the individual is expected either to cope for himself or to get assistance from community agencies set up for that purpose.

Still another difference that confuses first-generation Americans is the status of women, which is higher in America than in other countries of the world. Hence foreign-born parents are often upset by the claims for equal rights and privileges made by their daughters.

Children of foreign-born parents are subject to a greater number of psycho-

Educational Psychology in the Classroom

logical conflicts and pressures than are most children. Often there is a sense of insecurity, of not knowing what one should do. If the child tries to be the kind of person his parents expect him to be, he finds that this runs counter to what his playmates or his teachers expect him to be. Try as he may, he seems doomed to disappoint either his parents or his friends and teachers. It is hardly surprising, then, that second-generation American students report more than the usual number of problems. A survey taken by Paul Witherspoon (1960) in a San Antonio, Texas, junior high school found that students with Latin American parents encountered more difficulties in adjusting to school than their Anglo-American contemporaries did. As Table 4-1 indicates, they worried about the fact that they were receiving poor grades in school and were afraid of failing in school work. They felt that they were not bright enough and were afraid to speak up in class. In general, they were more likely to feel inadequate and ineffective. This tendency to blame themselves was in marked contrast to the reactions of their Anglo peers, who were inclined to blame their teachers and the school for their problems.

Students whose parents are strict adherents to certain religious sects also

TABLE 4-1. School Problems That Cause Concern, Showing at Least a 10 Per Cent Difference between Anglo-American and Latin-American Students Attending a Junior High School in the Working-Class District of San Antonio, Texas (Witherspoon, 1960)

Problem	Percentage of Children Reporting Problem			
	Anglo Boys	Latin Boys	Anglo Girls	Latin Girls
Getting low grades in school	35	63	24	43
Afraid of failing in school work	30	46	35	47
Trouble with arithmetic	34	59		
Trouble with spelling or grammar	20	32		
Not spending enough time in study	20	36		
Can't keep my mind on my studies	28	42		
Trouble with oral reports	20	32		
Not interested in certain subjects	38	28		
School is too strict	25	15		
Teachers not practicing what they preach	25	10	35	9
Slow in reading	15	29		
Trouble with writing	10	20		
Not smart enough	11	36	11	41
Afraid to speak up in class	15	32	21	49
Worried about grades			29	47
Not interested in books			29	6
Too little freedom in class			24	10
Dull classes			21	11

experience special problems, especially if they are in the minority in the school and have been encouraged by their parents to develop a feeling of being quite different from the other children. Often such students are avoided by their classmates and considered to be a group apart. No one enjoys being excluded or rejected, and the usual result is unhappiness and feelings of insecurity and inferiority. Inevitably, tensions and conflicts that affect large groups of students create grave problems for the school. Nor do parents like to see their children excluded and humiliated. One common solution to this problem has been for parents to place their children in a parochial school, where they will not be subject to the prejudice and open hostility of other children. Another solution employed by Amish parents in Pennsylvania is to form school districts of their own, so that the majority of children in attendance will be Amish.

Social Classes as Molders of Personality and Behavior. The subcultural patterns of behavior that are of the greatest potential interest to the teacher are the ones associated with the various levels of the social structure. Because of our democratic traditions, it is difficult for us to accept the fact that social classes actually exist in America. However, the research that has been undertaken in this field indicates that there are not only well-defined patterns of behavior which are characteristic of people from different class backgrounds, but that individuals can generally identify the social class to which they and their acquaintances belong.

A number of studies of this sort have been conducted on the class structure of small- and medium-sized towns. For example, a research group headed by W. Lloyd Warner, a pioneer in this field, spent a number of years studying a small New England town, which he called "Yankee City." He identified three major classes—upper, middle, and lower—which he further subdivided into upper-upper, lower-upper, upper-middle, lower-middle, upper-lower, and lower-lower. Figure 4-3 shows the percentage distribution of the classes as designated by Warner and his associate S. Lunt (1941). In the years intervening since Warner's study was done, there has probably been a shift in the proportions represented by the classes, with the middle classes increasing in size and the lower classes diminishing. One study of adults in Kansas City found that 32 per cent of the respondents had moved up socially (Havighurst and Neugarten, 1957). However, because lower-class families tend to be large, it is likely that the majority of children in school are from lower-class families (McCandless, 1961).

Social-Class Patterns of Behavior. As we read through the rather voluminous research on social class that has been published since Warner did his pioneering study, we find a number of recurring themes. In general, the

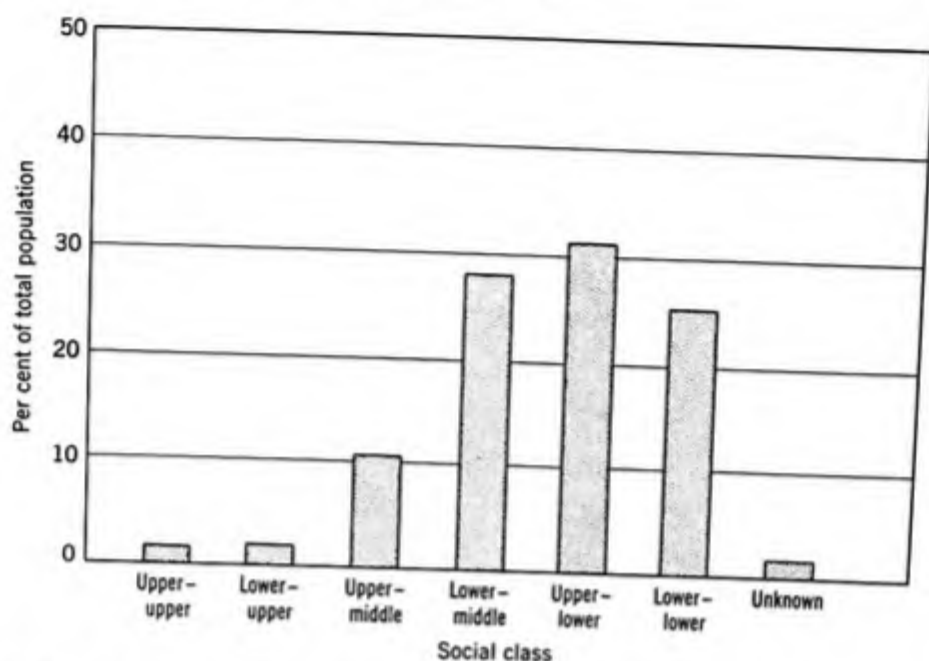


FIGURE 4-3. Distribution of the population of "Yankee City" by social class. (Warner and Lunt, 1941.)

higher the class, the greater the wealth. But wealth is not the most important factor in social status. Some of the members of the *lower-upper* class in Yankee City were wealthier than some of the members of the *upper-upper* class, and one individual in the *lower-lower* class owned property worth \$20,000. The people with whom one associates on an intimate and friendly basis are the most important determiner of class.

People in the upper classes live in the best houses in town. They are "the 400," the leaders of the "social set," and the "elite." Their support is sought for the promotion of civic enterprises, and their names appear at the heads of organizations like the Community Chest, the Red Cross, the Civic Betterment League, and the Art League. Their children are more likely to be sent to private schools. Upper-class families are much more strongly knit than are families of other social classes, and there is greater concern for maintaining the family name and prestige. In writing about a Midwestern town identified by the fictitious name of Prairie City, Havighurst and Taba (1949) described the values of the upper class as follows: "Members of the *upper class* place importance on their family's past history. They like to talk about the preceding generations. They like to spend money on things that will not produce a profit, such as objects of art, fine horses, fine houses, and philanthropy."

The middle class is numerically the largest of the three major classes in this country, and the values of its members are dominant in the American

culture. Essentially, the middle class believes in hard work, self-reliance, initiative, independence, responsibility, economic security, success in business or profession, self-improvement through education, and fidelity in marriage. Our educational system is closely geared to the needs of the middle class. Most school board members and teachers are members of this class. Middle-class families are quite stable, although there is a marked tendency for married children to drift away from the family, in contradistinction to the close ties maintained by upper-class families. Middle-class people are sometimes called "the white-collar class." The great majority of professional men, businessmen, and government officials are middle class. Upper-middle-class people usually have some college education, whereas lower-middle-class people have usually completed high school.

The families of people identified by research workers as "lower class" are more vulnerable to the hazards and trials of life than are upper- and middle-class families. A. B. Hollingshead (1949) found in his study of Elmtown that 33 per cent of working-class (upper-lower class) homes had been broken after fifteen or more years of marriage. This compares with 15 per cent of upper-middle-class and 18 per cent of lower-middle-class families in the same community. In the lower-lower class, at least half of the families were broken one or more times by desertion, death, divorce, or separation, often because of the imprisonment of the husband.

The upper-lower class consists of "the hard-working poor," skilled and semiskilled laborers, people with grade school education, often with a year or so of high school. Some people in this class make good money, save it, move to better parts of town, and gradually become lower-middle class. Others make good money but seem to be unable to keep it; they spend it as fast as they earn it and are unable to put any aside for a "rainy day."

People in the lower-lower class are largely unskilled laborers and the chronically unemployed. Life for them is a continual struggle for survival, a struggle that many of them feel they cannot win without outside help. Hollingshead says that they "give the impression of being resigned to a life of frustration and defeat in a community that despises them for their disregard of morals, lack of 'success' goals, and dire poverty."

Middle-class and lower-lower-class people differ sharply in their attitudes toward physical violence and sex. Boys from lower-lower-class families are often permitted or even encouraged to settle their differences by fighting, sometimes with knives, homemade guns, and clubs. Middle-class children are encouraged to express hostile feelings through competition in the classroom and on the playground. Settling differences of opinion by argument is an approved middle-class technique, but lower-lower-class society favors direct



Berni Schoenfield

The social-class background of a child becomes significant in terms of the values and attitudes that he is likely to bring to the learning situation at school. Generally speaking, the attitudes and values that the middle-class child learns at home give him a considerable advantage in the classroom, whereas those of the lower-class child do not.

physical aggression. Whereas middle-class children learn to develop guilt and anxiety about sexual activities of any sort, the sexual side of life is accepted more or less as a matter of course in lower-lower-class families. They do not develop the same attitudes regarding property that are characteristic of middle-class people; hence stealing and destructive acts are more common. Lower-lower-class people are thus more likely to come in conflict with the law than are people from classes above them. Indeed, the lower the social level, the higher the rate of arrests. Havighurst and Taba state: "As a generalization it might be said that lower-class children have fewer and less rigid controls



Ken Heyman

on the free play of their impulses, while middle-class children are made to inhibit their impulses through the watchfulness of their parents and the ever-present question in their minds, 'What will people think?'

Not only are lower-class children likely to exhibit less emotional control, but many of them have learned hostile and destructive patterns of behavior. A study of highly aggressive boys found that they had parents who punished aggressive behavior within the context of the home, but who expressed approval and thus reinforced aggressive behavior directed toward persons outside the home (Bandura and Walters, 1963). In their review of twenty years of research regarding the relationship between social class and maternal behavior, Elinor Waters and Vaughn J. Crandall (1964) found no difference between lower-class and middle-class mothers in the amount of affection they showed toward their children, but lower-class mothers were much more likely to use severe physical punishment. When Robert D. Hess (1964) of the University of Chicago asked Negro mothers what they would do if their child disturbed the class at school by some mild form of misbehavior, middle-class mothers were likely to reply along the lines of "I would try to find out why the child feels he must do these things," whereas lower-class mothers would simply say: "I would just give him a good spanking."

Educational Psychology in the Classroom

Adults who express their anger toward children through spanking, slapping, whipping, and beating actually serve as behavior models for their children. A child who receives severe physical punishment for lying or stealing may or may not learn to control his tendencies toward lying and stealing, but he *is* likely to learn to use force and aggression when frustrated or angered. His father may whip him for fighting, stealing, destructive acts, and sexual misbehavior, but he sees adults all around him, and perhaps even his own parents, engaging in the kind of conduct for which he is punished. How adults actually behave thus provides him with much more compelling cues for learning than what they say.

Because of the differences in behavioral norms for each sex, lower-class girls generally tend to express themselves less aggressively than boys do. Although some girls may find expression for their anger through hair-pulling and other direct forms of physical aggression, as a rule they tend to be shy and withdrawn, when contrasted with boys from the same social class. Gordon Liddle (1958) used the California Psychological Inventory to analyze the behavior of middle-class and lower-class adolescents and found that the psychologically withdrawn girl was more likely to be lower class than middle class, but that the withdrawn boy was more likely to be middle class.

Another approach to the study of social-class differences is the comparison of parental values. What is it that middle-class and lower-class parents want for their children? Figure 4-4 suggests that lower-class parents are more concerned with the surface aspects of behavior. Lower-class fathers are more interested in having their children obey, be popular with other children, and be "good students," whereas middle-class fathers are more interested in the qualities *underlying* good behavior: being considerate and dependable, and exercising self-control. These are qualities that facilitate classroom success, as is also true of other qualities preferred by middle-class fathers: being curious about things and being ambitious. Middle-class fathers are more likely to report that they want their children to be happy, whereas lower-class fathers say that they want their child to be able to defend himself (Kohn, 1959). We shall have more to say about such values a few pages later on, when we discuss social-class differences in classroom behavior.

How an Understanding of Social Class Is Helpful. There are two principal reasons why we are giving so much attention to the subject of social class in this discussion. The first is that a knowledge of class background is very helpful in understanding the behavior of children, and the second is that the schools are not meeting the needs of children from lower classes very well.

Let us consider the first. We have said that the attitudes, values, beliefs, feelings, personality, and general behavior of a child are conditioned or influ-

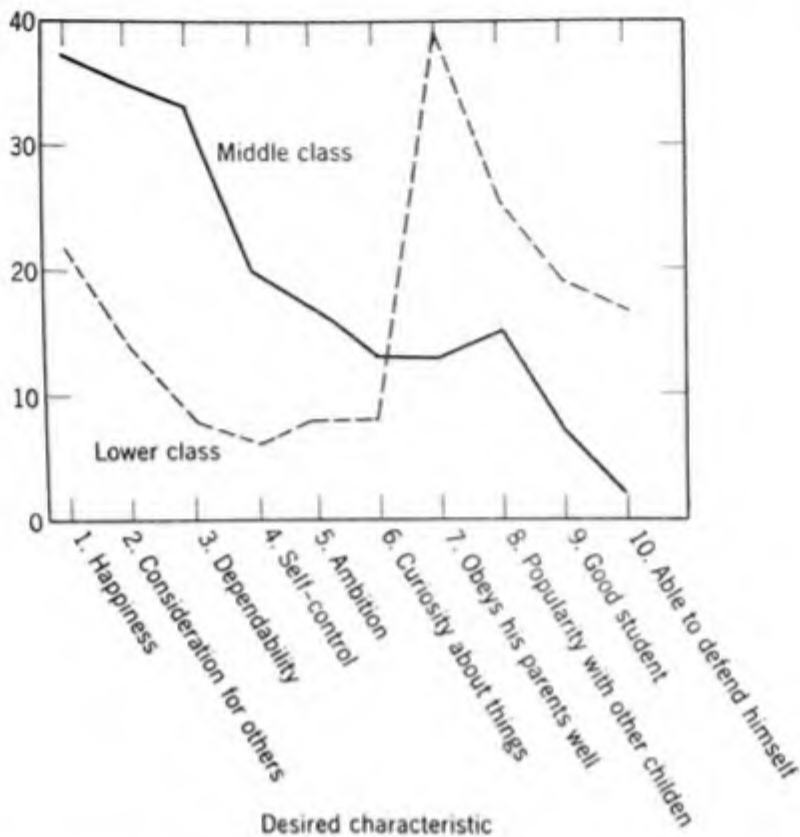


FIGURE 4-4. Percentages of middle-class and lower-class fathers selecting certain characteristics as one of three "most desirable" for a ten- or eleven-year-old child. (Kohn, 1959.)

enced largely by the kind of experiences he has in early childhood, long before he enters school. Inasmuch as there are such sharply defined differences in the kinds of lives lived by people in middle-class and lower-class surroundings, as well as in their general behavior, it follows that children coming from these two different kinds of backgrounds will think and act differently. The teacher who encounters a variety of patterns of behavior in his classroom should have some understanding of social class, because much of the behavior he encounters is the result of the social-class background of the students. Let us assume that a ten-year-old boy is caught stealing money from another child. If he comes from a slum environment, we are going to make some interpretations of his behavior in the light of that information. But if he comes from a middle-class background, we are going to make quite different interpretations. The information that we gather regarding a child's background will help tell us "what the behavior means" to the child. And if we can find out "what the behavior means," we can find out why he steals and what we must do to help him learn to refrain from stealing.

Educational Psychology in the Classroom

The value of knowing and understanding social-class backgrounds is not limited to preventing delinquency. If we are to plan instructional methods and curricula in such a way as to make sense to students, their background must be taken into account. A third-grade reader that describes a family whose father works in an office, whose children play with ponies and electric trains, and whose home is surrounded by wide, green lawns will have little real meaning for children who live in a crowded, down-at-the-heels section of a large city. The life that such a reader describes is just not a part of their personal experience; it deals with images that are foreign and largely unknown to them.

Furthermore, the attitudes of children toward education will be colored by the attitudes of their parents and their peer group. Middle-class students are expected to excel and generally expect themselves to excel. They are as a rule quite keenly aware that success in adult life depends on success in education. Lower-class students often see education as something that they are likely to fail at, something that is an unpleasant, frustrating, and dreary interlude in their lives. Sometimes a class of lower-class students will make wonderful progress for a teacher whom they really like, who understands their problems. But when the next year they go on to a new teacher, someone who does not understand them as well, their interest flags and they drop back into the old feeling of apathy and frustration. The educational effort of lower-class students is more likely to be on a personal basis; their attitudes and study behavior are largely colored by their relationship with their teacher and with the other students in the same classroom. Because they are less likely to see education as the means to progress and future success, the personal influence of the teacher means much to them. Middle-class students, on the other hand, are more likely to work hard even for teachers they do not like, because they are afraid not to succeed. There are many individual exceptions to these generalizations, of course, and the patterns of behavior differ from school to school and community to community. However, the general trend is for middle-class students to be more strongly motivated to work hard at the job of school learning in the expectation of future success, a kind of motivation that is so often lacking with lower-class students.

A knowledge of social-class background is also important in understanding the *group* behavior of children at school. Lower-class students are rather commonly left out of the social activities of the school, particularly in the upper grades and in high school. The feeling of being excluded or not wanted naturally adds to their dislike of school. In one study of elementary school children, Bernice L. Neugarten (1946) found that children from lower-class families were rated low by other children in good looks, leadership, friend-

ship, and other desirable traits, whereas children from middle-class and upper-middle-class homes rated high. The tendency to associate personal qualities with social class seems to be universal. It appeared, for example, in research with Brazilian elementary school children conducted by the present author and Hilda de Almeida Guedes (1963) of the Regional Center for Educational Research at the University of São Paulo. In this study, children whose parents had some secondary school education (that is, were middle class) were more likely to be perceived as leaders by the other children. As part of the study of the youth of Elmtown, Hollingshead (1949) recorded dating patterns of high school students over a one-month period and found that 92 per cent of the upper-middle-class boys dated girls from their own social class or the lower-middle class, whereas 98 per cent of lower-class boys dated girls from their own social class.

The social isolation of lower-class youth is revealed by other data gathered by Hollingshead. More than 90 per cent of the upper-middle-class adolescents seldom missed a high school athletic contest, whereas about half the students in the lowest class attended no games and the other half merely attended a few. There were similar differences in attendance at school dances, plays, and parties. Students from upper- and upper-middle-class homes constituted 9 per cent of the student body at Elmtown High School, but 22 per cent of the elected student-body representatives came from their ranks. All the students in the two upper social classes were involved in some extracurricular activity, as contrasted with 23 per cent of the upper-lower-class students and none for the lowest class.

Part of this nonparticipation occurs because lower-class youth have little money, but a major factor appears to be the result of attitudes—attitudes toward oneself, attitudes toward other social classes, and attitudes toward society in general. We have shown earlier how lower-class parents reinforce hostile behavior and how the values they hold for their children are concerned with the more superficial aspects of social behavior, rather than with the development of positive attitudes toward others. This background helps explain some of the difficulties that lower-class children encounter in school. Their problems are further complicated by the fact that the kind of adult behavior that reinforces the responses of middle-class children does not serve as a reinforcer for them. Middle-class children come to school prepared to perform and produce in a system where reinforcers for learning (such as marks) are largely impersonal in nature, but lower-class children, as we have suggested above, respond best to a highly personalized approach. These differences were brought out in a study showing that middle-class children's behavior could be reinforced if they were told merely that their answers were



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Whereas the middle-class child is helped to succeed in school by the values he has learned at home, the lower-class child who attains a satisfactory level of achievement usually does so in spite of the values he has learned. Rural children, too, are often at some disadvantage when they have to compete with urban children.

correct. Being told they were correct had little effect on lower-class children, but they did respond favorably to praise (Zigler and Kanzer, 1962).

Meeting Educational Needs of Learners from Lower Social Classes. The second reason that we listed for understanding the social-class background of children was the relatively poor success that results from our attempts to educate those from lower-class backgrounds.

The school system as it exists today is geared to satisfy the needs and hopes of middle-class people. The people who serve on the school boards, manage the schools, and teach the children are inclined to see educational problems from a frame of reference composed of the values of their own class. When children and parents from other social classes come in contact with the middle-

class values of the school, there is bound to be misunderstanding and confusion. Florence McGehee (1952) describes the plight of a teacher who tries to explain to a family of Mexican farm workers living in a Sacramento Valley town why it is that they cannot take their son, Jesús, out of school even though the tomato picking season is at hand. The family assumes that their needs take priority over the demands of the school, and the middle-class, Anglo teacher has great difficulty not only in keeping Jesús in school but also in understanding why his family so naïvely expects that the school will let him go.

When members of a group feel that their psychological needs are not being met by the group and that they are not really wanted, they are likely to drop out at the earliest opportunity. This is exactly what children from lower classes do. Data from Hollingshead's study of Elmtown and James S. Davie's (1953) study of adolescents in New Haven, Connecticut, displayed in Figure 4-5, show that nonattendance in school is closely related to the socioeconomic level of the family. Davie attributed this relationship to three factors: *economic*—the financial ability of families to keep their children in

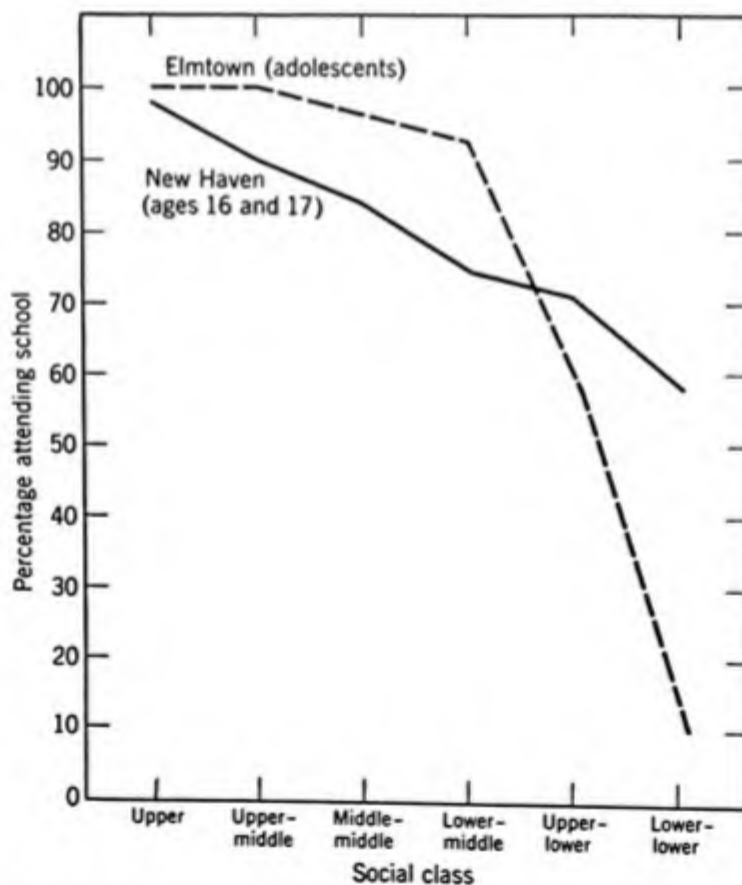


FIGURE 4-5. Percentages by social class of New Haven and Elmtown adolescents attending school. (Hollingshead, 1949, and Davie, 1953.)

Educational Psychology in the Classroom

school; *custom*—the tendency of parents to educate their children as they were educated (or a little better) and as friends and neighbors are educating their children; and *attitudes toward education*—the beliefs prevailing in the families with respect to the purpose and value of education.

Quite a few lower-class children do become "success-oriented," sometimes because skillful teachers realize their potentialities, sometimes because of friendships with middle-class students, and sometimes because of a combination of favorable psychological and environmental factors. But such a student has to develop an unusually high degree of courage before he can break the ties that bind him to his culture. His older brother asks: "Why don't you drop out of school? You're old enough to quit. Why waste your time with that stuff?" And his father adds: "What's the matter with you? Do you think you're better than the rest of us? Afraid to get your hands dirty? Go out and get yourself a job—be a man! I didn't raise my son to be a pantywaist book reader!"

Many of these children are not able to stand up against the hostile and rejecting attitudes of their family and acquaintances and consequently lack the motivation to succeed in school. Whereas the middle-class child succeeds *because* of his parents and their values, the lower-class child who does succeed, succeeds *in spite of* them. Lower-class students sometimes do defy their family's attempts to discourage academic success. Such students tend to become more highly motivated to succeed than the average middle- or upper-class student. This is especially common with city children. Norman F. Washburne (1959) found that academic success in college was correlated more with the "urbanism" of students than with their socioeconomic status. In other words, students who came from city high schools made better grades than those who came from rural high schools, irrespective of their social-class background. The problem, of course, is how to help the able lower-class child make the kinds of choices that will keep him in school until he is ready to enter college. Because of parental negativism or apathy, the teacher may be the only person in the lives of many children from lower-class homes who is able to encourage them to make progress in school. One possible solution might be that of persuading parents to be more encouraging of school success, but lower-class parents are "hard to reach" and are reluctant to visit schools or to confer with teachers. Celia Burns Stendler (1951) noted that lower-class parents were less likely to come to school when conferences were substituted for report cards. Lack of interest also showed itself in another way: virtually all upper-class and upper-middle-class parents in her survey sent their children to kindergarten, as contrasted with only 14 per cent of lower-class parents. A study undertaken by William F. Anderson (1954) indicates that lower-class

parents do not think very highly of teachers. He reports that upper- and upper-middle-class parents were more likely to rate teaching as a more suitable profession for their sons and daughters than were lower-class parents.

The degree to which middle-class parents involve themselves in their children's education is shown by some of Hollingshead's findings in Elmtown. Although middle-class youngsters in Elmtown High School received better grades than did students from lower social classes, teachers nevertheless had twenty-one interviews regarding school progress with middle-class parents and only six interviews about discipline. On the other hand, they had only thirteen interviews regarding school progress with parents in the two lower classes, as contrasted with thirty-seven interviews on discipline, even though the lower-class students were making lower marks than middle-class students.

The work of Hollingshead and others in the fields of sociology and psychology indicates that there is a vast gulf between the actual accomplishments of the school and the unmet needs of one third of the school population—the students from working-class and lower-class homes. This is not to say that the school should provide a separate curriculum for lower-class students or that it should abandon the idea of teaching middle-class values. The problem is rather one of understanding the values and self-concepts of students and parents who do not live in middle-class homes, of helping them to develop a greater feeling of membership in the school community and the community outside the school, and of making gradual adjustments in the curriculum of the school so that it meets the needs of all students, regardless of class origin. If we carry out such a threefold program, it will mean that we as teachers will have to help children develop greater tolerance and mutual respect for one another as people, rather than as representatives of cultural groups. Inasmuch as children take their cues from adults in this regard, it means, in the final analysis, that we must work with adults in eliminating or reducing interclass prejudice. Carrying out this program means that teachers, as well as parents, must examine their biases, because they too play a large part in guiding the attitudes of children.

Merely trying to understand children requires that we readjust our perspectives. If we continually compare all children with typical middle-class norms or patterns, we are likely to concern ourselves more with criticism than with understanding. This does not mean that we should abandon our middle-class principles but rather that we should be more "sympathetically aware" of other patterns of living and should try to understand other people in terms of their own value systems, rather than ours. Finally, carrying out such a program of reevaluation would mean that the school curriculum would be expanded, particularly at the secondary level, so that it might become more

Educational Psychology in the Classroom

concerned with developing a wider range of students' abilities than most school systems do today.

SUMMARY

The greater share of children's learning experiences occur outside the school. The most basic learnings—attitudes and ways of behaving toward oneself and others—take place in the home, particularly during the preschool years.

Many of the clues that help us understand the behavior of students can be found through studying their family backgrounds. The facts relating to the family situation can be quite useful—whether the home is broken or intact, whether the mother works, and so forth. What is even more important, however, is the emotional climate that prevails in the family: what kinds of attitudes and feelings members of the family have toward one another, what kind of relationship exists between parent and child, how much freedom of expression and decision is permitted, the degree to which relationships are authoritarian or democratic, and the like.

The attitudes parents express are partly individual and partly determined by their cultural group. A child growing up in an American family would therefore be most likely to learn the values and attitudes typical of the American culture. There are, however, many subcultures that are variations of the larger American culture, each with a value pattern of its own. Because children are to so large a degree products of their home environment, patterns of behavior and personality that are at variance with the dominant patterns in the school and community often lead to problems of misunderstanding and conflict. Such problems are common, for instance, in families headed by foreign-born parents.

One of the most important subcultural groupings, from the standpoint of the teacher, is the one based on the social-class structure. Most teachers have middle-class backgrounds, and the values that dominate the philosophy of the school also tend to be middle class. Hence it is frequently difficult for teachers to understand the behavior and motivation of students from lower-class backgrounds. Middle-class students tend to dominate the social affairs and activities of the school. Because they understand the values that dominate the school, they find it easier to succeed. Because lower-class students more frequently encounter failure and frustration in the schools and because they feel socially isolated, they are inclined to drop out of school as soon as the opportunity presents itself. Their problems are further aggravated by their parents' lack of interest or generally negative attitudes toward schooling.

The school's responsibility toward students from lower-class homes is severalfold in nature. Teachers need to understand the values and attitudes that lie behind the behavior of these students, to eliminate or reduce the prejudices that isolate them from other students and from school life, and to revise the content of the curriculum in order that their educational needs may be met.

SUGGESTED PROBLEMS

1. Select a person you know whose behavior indicates a rather consistent pattern of attitudes and values. From what you know of the person, how do you think these values or attitudes were influenced by his family and its background? You may use yourself as an example, if you wish.

2. Think back to your school days and see if you can remember any group of students who were set apart from the others because of their attitudes, values, and general behavior. How did the teachers regard these students? How did the other students regard them? What kinds of problems did the students create for the school? What kind of problems did the school create for the students? Do you have any idea of the way in which their families had shaped the values and attitudes of these students?

3. Discuss the family backgrounds of the popular and unpopular children in the schools you attended. To what extent do you think that their popularity (or lack of it) was related to their family background?

4. What specific changes do you think should be brought about in the high school you attended (or some other high school known to you) in order to meet the needs and problems of students from lower socioeconomic levels of society?

SUGGESTED READINGS

Bronfenbrenner, U., The changing American child—a speculative analysis. *J. Soc. Issues*, 1961, 17 (1): 6–18. A provocative and stimulating discussion of recent trends in child rearing and the possible outcomes in terms of child behavior.

Charters, W. W., and Gage, N. L., eds., *Readings in the social psychology of education*. Boston: Allyn and Bacon, 1963. See particularly Section I: "Social class and family influences."

Elkin, F., *The child and society*. New York: Random House, 1960.

Ginzberg, E., ed., *The nation's children. Vol. 1: The family and social change*. New York: Columbia Univ. Press, 1960. A series of short discussions of what has happened to the American family in recent years and the effect that these changes are having on children. Prepared for the 1960 White House Conference on Children and Youth.

Educational Psychology in the Classroom

- Havighurst, R. J., Bowman, P. H., Liddle, G. P., Mathews, C. V., and Pierce, J. V., *Growing up in River City*. New York: Wiley, 1962. Longitudinal study of youth in a Midwestern city of 45,000 population, with special emphasis on social class and its effect on behavior and developmental trends.
- Havighurst, R. J., Social-class influences on American education, in N. B. Henry, ed., *Social forces influencing American education*. 60th Yearbook of the National Soc. for the Study of Education. Chicago: Univ. of Chicago Press, 1961.
- Hollingshead, A. B., *Elmtown's youth*. New York: Wiley, 1949. An intensive study of social-class behavior as expressed by adolescents of a small town in Illinois.
- Landes, R., *Culture in American education*. New York: Wiley, 1965. Describes experiences in conducting an experimental program in Southern California concerned with helping teacher trainees to work with Mexican-American students.
- McCandless, B., *Children and adolescents: behavior and development*. New York: Holt, Rinehart, and Winston, 1961. See Chapter 14: "The middle-class teacher and the 'every-class' child."
- Sears, R. R., Maccoby, E. E., and Levin, H., *Patterns of child rearing*. Evanston, Ill.: Row, Peterson, 1957. A study of how 379 working-class and middle-class mothers brought up their children.
- Warner, W. L., Havighurst, R. J., and Loeb, M. B., *Who shall be educated? The challenge of unequal opportunities*. New York: Harper, 1944. Although written twenty years ago, this book does an excellent job of pointing up some of the problems that social-class differences create for teachers and students.
- Westby-Gibson, D., *Social perspectives on education*. New York: Wiley, 1965. See particularly Chapter 7: "Social learning in the family."
- White, R. K., and Lippitt, R., *Autocracy and democracy: an experimental inquiry*. New York: Harper, 1960. A report on the "social-climate" experiment referred to in this chapter.

5 The Learner and His Group



Audio-Visual Services, Alameda County Schools

The Need to Relate to Other People. Probably most of us have at times had the feeling of emptiness when we discovered that we were all alone at home with a long evening ahead, or when we were the stranger in a new group. This feeling of emptiness is one of the ways in which our need for others expresses itself. Being isolated or alone sometimes makes us feel insignificant or inadequate—as though, somehow, we were not complete. Just having one person to talk to makes a great deal of difference. Then the feeling of emptiness and incompleteness vanishes, and again we have the feeling of being “somebody.”

This feeling of loneliness is actually a kind of anxiety—a fear of being cut off from others. Anxiety is what Rollo May (1950) terms “the fear of becoming nothing.” The anxiety that we sense when we are alone is a reminder of how important other people are to our very existence as “somebody.” Without others, we sense the anxiety and fear of being “nothing” or “nobody.”

As we have indicated in Chapter 2, the roots of this need for other people go back to earliest infancy. We see it in the behavior of the infant who is upset when his mother is upset. We see it in the early years of development, when the child develops his self-concept from the attitudes of others toward him; in effect, the child learns to know himself through the people around him. As he grows and develops through the stages of childhood, adolescence, and adulthood, he continues to depend upon the attitudes and feelings of others in order to develop his self-concept. As he becomes more mature, he is more selective and more critical of the appraisals others make of him. For example, during middle childhood and adolescence young people often come to depend more on the opinions of their peers and less on the opinions of their parents and other adults. However, we usually discover that even our peers vary in their appraisals of us; hence we normally learn to check the opinions of others against our own perceptions and thus develop self-concepts

that are arrived at more independently. The process of developing a self-concept that is based on a balanced appraisal of what others think of us and what we think of ourselves usually extends over the first thirty or forty years of our lives. Some people never achieve this level of emotional maturity and go through life completely dependent on the opinions of others.

There are practical, as well as psychological, reasons why others are important to us. There are the "survival" reasons: the very nature of our complex, urbanized society makes it necessary for us to depend on one another for food, clothing, shelter, and protection against danger and disaster. Generally speaking, however, such needs are met on a fairly impersonal level. We eat the bread baked by others and live in houses built by others, unconcerned with how the bakers and the builders might feel about us. But the personal factor—how people feel about us—is of paramount importance in satisfying basic needs other than those concerned with the maintenance and protection of the physical organism. Needs for attention and the need to belong, for instance, cannot be satisfied unless others have positive feelings toward us. Most of the ills of the world are related directly or indirectly to the frustration of these needs. Even the need for self-expression depends on others, because much of the satisfaction that comes through self-expression is the result of the attention and general reaction of our audience.

Relationships with Others during Childhood and Adolescence. The basic trend in growth and development from infancy to maturity is one of increasing independence. The infant is completely dependent on his parents for food, protection, and love. During the preschool years, the child is less dependent, but only to a degree. During this period, he depends on his family to teach him the information and skills he needs to cope with the problems of his small but complex world. This learning, in turn, helps him to become less dependent on others.

Entering school is the first big step away from the family into the outside world. Many of the ties that hold the child to the family begin to loosen or start to dissolve at this point. Not only does the child begin to spend a large part of his time under the supervision of adults outside his immediate family, but he becomes a part of a "peer society"—a member of a group of individuals who are his approximate equals in size, age, and status. This group fills a great and growing need for him, for with them he learns to develop new feelings of adequacy and acceptance. For one thing, their standards are not the standards of adult conduct to which parents and teachers constantly compare him, but are instead standards that are more readily attainable. Nine-year-olds expect nine-year-olds to behave like nine-year-olds, and to do things that nine-year-olds can accomplish. Hence they usually feel more comfortable

in the company of other nine-year-olds than they do in the company of adults.

The need to be protected, supported, and directed by persons stronger than oneself (that is, the need to be dependent) is largely a childish need—that is, it is more appropriate for children than it is for adults. Hence we would expect that, as children mature, they would need less care, protection, and direction. The reason why we stress this point is that there is a tendency for parents and teachers to want to *overprotect* children, to *keep* them in a dependent status, and to continue making decisions for them that they are capable of making for themselves. This tendency is understandable; it is hard for us to let go the reins of authority when we have held them for so long, and it is hard for us to stand by and not interfere when students are making mistakes. We forget that making mistakes is an important part of the learning process. Our reluctance to let children have the freedom to do their own learning is one of the basic causes of the bitterness and rebelliousness that many adolescents and preadolescents feel toward adults.

DEVELOPING RELATIONSHIPS WITH OTHERS

The Preschool Years. The relationships that children develop with their peers normally follow a rather well-defined pattern, a pattern that can be most readily observed in play situations. M. L. Parten (1932) observed the play of preschool children and classified their social participation into six forms or levels: unoccupied behavior, onlooker behavior, solitary independent play, parallel activity, associative play, and cooperative or “organized supplementary” play. The terms applied to the first three forms of activity are self-explanatory. Parallel activity describes situations in which a child plays beside other children but not with them. He does not openly influence them, nor do they try to influence him. In associative play, the child is more actively involved in the play of others. The children engage in activities that are identical or similar. They borrow toys and other materials and imitate one another. In cooperative play, the child is a member of a group that plays a game, or makes a product (like mud pies), or engages in role playing (like playing house or engineer and conductor).

Figure 5-1 shows the difference in the kinds of play preferred by older preschool children as compared to those preferred by younger ones. Children under three years of ages are principally involved in solitary play, parallel play, or in being onlookers. Children over four are still occupied with parallel play but engage in far more associative group play and cooperative play than younger children.

Educational Psychology in the Classroom

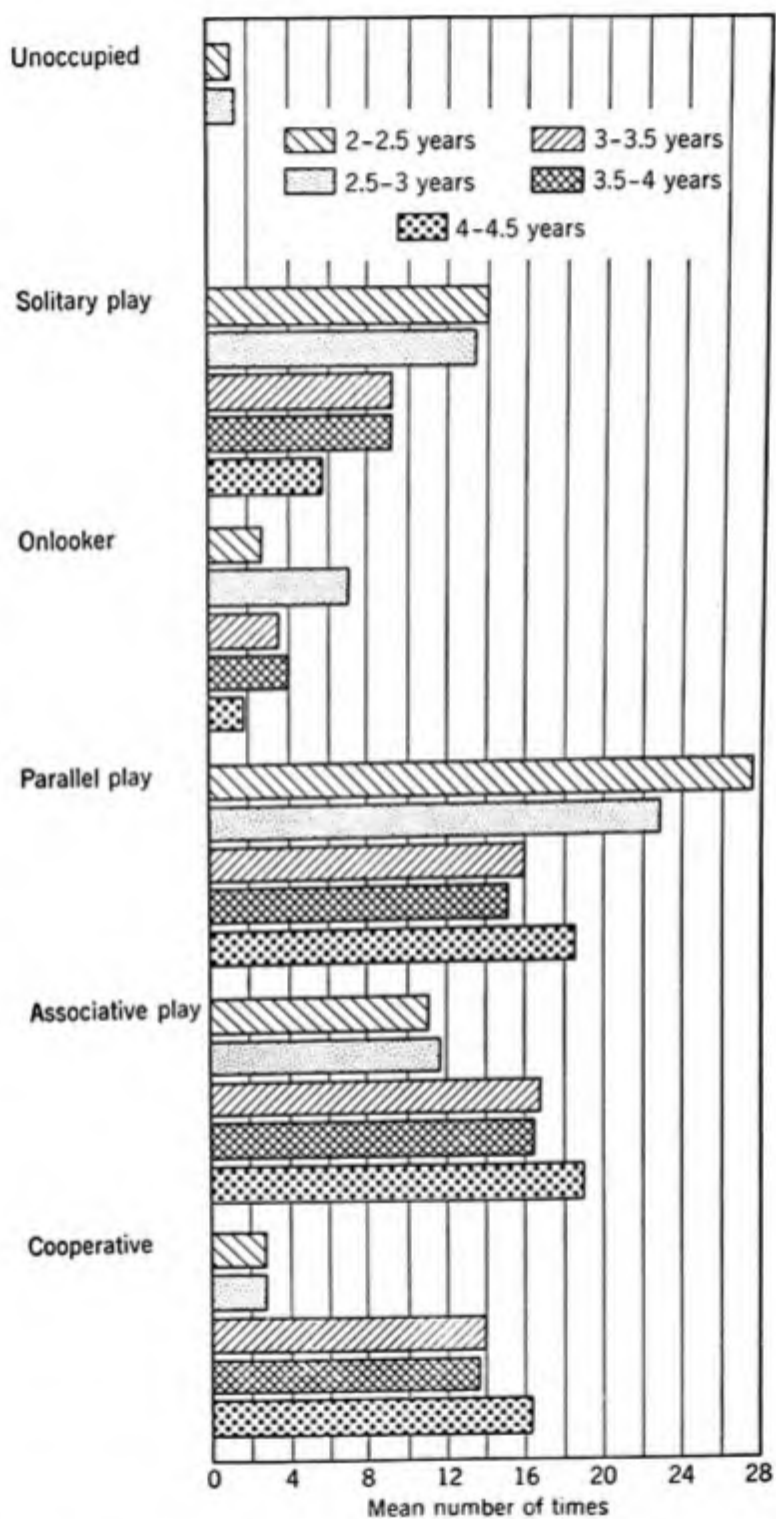


FIGURE 5-1. Play patterns during preschool years. (Parten, 1932.)

Preschool children are likely to be individualistic. They are not very much concerned with developing group relationships. When they do play together cooperatively, it does not last very long. Preschool children will usually accept any child as a playmate, provided he wants to play what they are playing. Even adults are acceptable as playmates. There are exceptions to this, of course. Sometimes two or three preschoolers in a nursery school will choose to play with one another and with no one else, and such an association may continue for months. More usually, however, their choice of playmates will change from day to day and week to week.

Because the group feeling of preschool children is not very strong, they do not develop their own standards of behavior. They have all they can do to conform to the standards that adults have set for them. Children of this



Suzanne Szasz

Parallel play is one of the intermediate developmental stages of play between solitary activity and cooperative play.

age do not form close-knit, easily managed groups. When they are together, they are more "collections of individuals" than real groups.

The relationships that an individual maintains with others can be used as a rough index to the level of emotional and social maturity he has attained. The attitudes of the infant or the young child are self-centered; his concern about others is limited to the effect their attitudes and behavior have upon his sense of well-being. His relationship with his parents is that of a small person who demands and receives attention, love, care, and protection. He is primarily a receiver rather than a giver. When he plays with other children, his self-centeredness expresses itself in the rule, "What's yours is mine, and what's mine is mine." With the help of his parents, his siblings, and older, more mature playmates, he learns to share his playthings and to take turns. Perhaps he learns this more socialized behavior as a compromise that helps avoid unpleasantness, perhaps this learning comes about as a way of avoiding the anxiety he experiences when his parents disapprove of his self-centered behavior, or perhaps he learns as a natural consequence of wanting to play with other children. Or it may be that all these factors and others operate simultaneously. For whatever reason, as he reaches the end of the preschool years, he becomes somewhat more concerned about the rights, feelings, and general welfare of parents and playmates. Usually this is on a minimal basis, for he is still more of a receiver than a giver. Nevertheless, this change represents a definite widening of the scope of his emotional and social life.

Relations with Others during the Middle Years of Childhood. It is the school, of course, that is the great socializing agency during the middle years of childhood. Teachers consciously and deliberately encourage a wide variety of group behavior through such means as committee research, group play, study groups, and the like. American education differs quite sharply from education in Europe and elsewhere in the extent to which it encourages children to develop a group life of their own. This emphasis does not come about solely because school personnel think it desirable that children learn to function in groups. Actually, the ability to function adequately as a group member is a quality that is rated high in the American culture. If a child has difficulties in relating to his peers, his parents even more than his teachers are likely to be concerned with his "poor adjustment." A child is under considerable pressure to become the kind of person who makes friends easily, functions effectively in groups, is liked by others, and so forth. Although the average American adolescent may not be satisfied with the extent to which he has achieved these goals, he does achieve them to a greater extent than do the youth of other countries, where the ability to function effectively in relaxed and informal social settings is not deemed as important.



Berni Schoenfield

These kindergarteners are not only learning how to participate in cooperative relationships but are also learning to develop some sense of being members of a group.

The attainment of these goals actually requires a great deal of skill and maturity; hence children make progress only by slow degrees. During the early years of elementary school, the typical arrangement is the "playmate" or "best pal" relationship. Sometimes such relationships are formed even as early as the later nursery school years. This stage of social development occurs when children want to share their experiences with someone with whom they can communicate easily and readily. They are no longer content to spend much time playing by themselves or watching other children, nor do they want to spend much time with adults. This is an age of exploration, of finding out things about the world outside the home, and it is more interesting if you can find out things in the company of a congenial playmate.

The group relationship is not very important at first. Children gradually become aware of the larger group, particularly when they begin to attend school. In school, the teacher talks to them as a group and directs them into group activities that require cooperation and collaboration. In such situations children begin to get a feeling for the interaction that takes place when a group of individuals come together and develop relationships with one another. But it is difficult for children in the five-to-eight-year stage of development to focus on the larger group relationship very long. They are more comfortable working and playing in small, closely knit groups of two or three. When two or three children this age are playing together and another child tries to enter, the original pair or trio often object. This is hard on the rejected child, of course, but he usually finds some other child who does not have a playmate. This is a normal and natural stage in social development, and it usually does not pay to force pairs of playmates to include another child as a member of their group. Children have a need to find out about other children at this age; it is a necessary prerequisite to their becoming functioning and effective members of larger groups later on.

Some of these "best pal" relationships are quite stable and last for months or years; others are temporary and vary according to whoever happens to be available or interested. But the urge to find a playmate is usually quite strong during this stage of development, and the child who cannot find anyone to play with generates some anxiety until he locates a partner or a small group that will accept him. During infancy and babyhood, the greatest source of anxiety for children is the feeling that their parents are rejecting them; during the later periods of development, they become anxious when they feel that their *peers* are rejecting them. Because of its ability to arouse anxiety, the peer group assumes more and more control over the attitudes and behavior of the child with each succeeding year of growth.

Some of the subtle ways in which this control has its effect is demonstrated by a study, conducted by Matilda White Riley and John W. Riley, Jr. (1951), of the preferences of fifth- and seventh-grade children for animal comics. Their findings, presented in Figure 5-2, indicate that children who are members of peer groups—that is, who are members of groups of playmates and friends their own age—were less attracted to animal comics. This finding is particularly significant when we remember that preference for animal stories and pictures is more characteristic of younger children than of adolescents and adults. In other words, it is a rough index of psychological maturity. Hence those children who had been able to invest something of themselves in groups outside the family tended to be more mature than those who had been unable to form such attachments. In passing, it is interesting to note

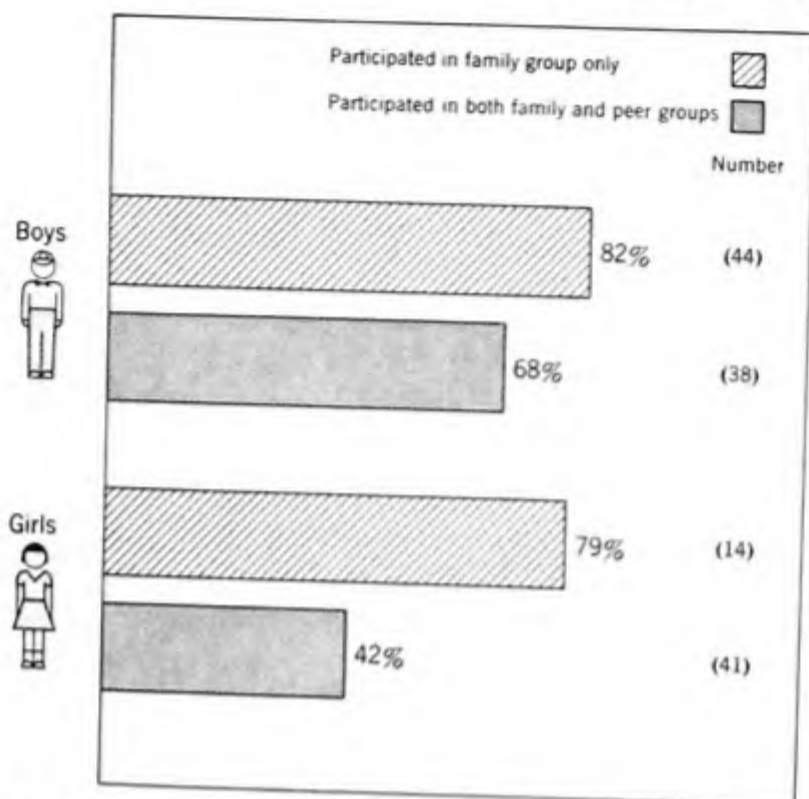


FIGURE 5-2. Preferences of fifth- and seventh-grade children for animal comics. (Riley and Riley, 1959.)

that the differences are more pronounced with girls than with boys, and that far fewer girls preferred animal comics. These differences suggest that girls are more advanced in maturity than boys of the same age, a matter to which we will give close attention in Chapter 7 when we discuss some of the problems that develop from this difference in levels of maturity.

As the child proceeds from the primary grades into the middle grades, the "best pal" arrangement continues to be a common mode of social participation. Helen Hall Jennings (1948) says that it reaches a peak in the second grade, but that it also rises sharply in the fourth, sixth, and eighth grades, as well as in high school. In grade school, paired friendships are almost entirely between members of the same sex. During the fifth or sixth grade, the social pattern of the classroom group becomes more complex, and small, close-knit groups begin to appear. Jennings believes that the appearance of these groups results from the growing desire of children in this stage of development to declare themselves independent of adult society. Being a member of a group, albeit a small one, gives a child the feeling of support and reassurance as he copes with and perhaps challenges the world of adults.

The appearance of group identification in primary school children has been studied by G. R. Patterson and D. Anderson (1964), who noted that

third-graders were more responsive than second-graders when their classmates tried to get them to change their responses in a simple task set by the experimenters. In other words, the older children were more easily influenced by their peers than were the second-graders. The difference between the performance of second- and third-graders can be explained in terms of the fact that the third-graders are more "other-directed"—that is, they are more alert to and aware of the opinions of others, and the opinions of others carry more weight with them.

Teachers who use group methods with children should keep in mind that this kind of arrangement is a relatively new experience for them. Children, particularly in the primary grades, are fairly self-centered individuals, and most of them have some problems in learning the give-and-take that is necessary for successful group functioning. Their social immaturity is revealed in a study by Moses H. Goldberg and Eleanor E. Maccoby (1965), who conducted a research study with second-graders. The researchers formed groups of four children each and gave them the task of building towers out of blocks. During the course of the experiment, they changed the membership of some groups, but not others. Those groups in which the membership was not changed were the more successful in completing the assigned tasks. This finding is in contrast to experiences with adult groups. In one study with adults, groups that experienced changes in membership were more successful in problem solving than groups in which no changes were made (Hoffman and Maier, 1961). But children evidently respond better to the security afforded by a stable group and are distracted when there are too many changes.

One problem that appears during the early and middle school years is the conflict between the need for affiliation (*n Aff*) and the need to achieve (*n Ach*). As the foregoing discussion would suggest, *n Aff* is a more prominent feature of this period than *n Ach*. But *n Ach*, particularly as picked up by the middle-class child from the expectations, promptings, and exhortations of parents and teachers, may cause difficulties if it runs counter to *n Aff*. The conflict arises because of the fact that in the typical school situation it is difficult to achieve academically without competing, and competition among friends is at best awkward. For one thing, it raises the question of whether the status of one friend can be elevated without lowering the status of the other. The child who through hard work and persistence has raised his C in spelling to a B finds his joy somewhat dimmed when he learns that his friend got an A. Middle-class children become somewhat hardened to this and most of them learn to accept academic competition and striving for achievement as an unavoidable fact of life, but a great many lower-class

children never learn to accept competition and find it disturbing and discouraging, rather than stimulating.

Relationships with Others during Adolescence. The conflict between *n Aff* and *n Ach* becomes more intense during adolescence. In high school, particularly toward the later years, students who are college-bound become aware that their future success is to a large extent dependent on their academic records, and *n Ach* becomes a stronger motivating force. But *n Aff* is also powerful, and many an adolescent must make decisions several times a day as to whether he will let *n Aff* or *n Ach* determine his behavior. Girls appear to have more trouble with this conflict than boys, because *n Aff* becomes related to and involved in hopes, expectations, and plans for marriage and motherhood. Rae Carlson (1965) found no differences between sixth-grade boys and girls with regard to their social orientation, but six years later the girls had become much more socially oriented (*n Aff*), whereas boys had become more self-oriented (*n Ach*).

Both *n Aff* and *n Ach* involve a movement out of and away from the childhood home, psychologically speaking, for most young people. During



Audio-Visual Services, Alameda County Schools

It is in informal settings, such as high school cafeterias, that teenagers acquire important facts and skills relating to peer-group interaction.

Educational Psychology in the Classroom

the earlier stages of adolescence, the young person is attracted to groups of his peers (*n Aff*), whereas *n Ach* leads him to think in terms of independence and self-sufficiency. As *n Aff* begins to become a strong source of motivation, children start to show a preference for peer-group standards of behavior, as contrasted with the standards set for them by adults. Thus the parent who has been able to set and enforce bedtime hours for his child suddenly finds that his twelve-year-old believes that 9 P.M. is an unreasonable hour, because none of his friends have to go to bed so early.

The adolescent lives in a world in which two standards rule: one based on the expectations that adults have for him and the other based on the expectations of the peer group. The adolescent who loves his parents but who also wants to be accepted by his peers may have a problem in deciding which standard will govern. Usually he makes some kind of compromise, letting parental standards govern some aspects of his behavior and peer standards other aspects. But the peer group often has the edge in such contests, partly because of the generally outward direction of social development and partly because our culture places so much value on getting along with one's peers. This is less of a problem in other cultures. Young people in Germany, for example, are more concerned about maintaining good relations with their parents, whereas American youths tend to be more interested in getting others to like them (Suellwold, 1959; Remmers, 1962).

Relations of adolescents with the school present another dimension of the same problem. James S. Coleman (1965) describes the American high school as a compulsory closed society, which coexists with the world of the adolescents outside the school. Adolescents today, thanks to the general availability of part-time jobs and the generosity of their parents, are relatively free to do as they will, buy what they want, and use time as they think best—all without being responsible to any one. The school is obviously at a serious disadvantage when it tries to compete with such an environment in attracting students' interest. Coleman reports that football, popularity, good looks, and having a good time are judged by students to be more significant than academic achievement. Athletics seems especially important because they represent a highly visible kind of achievement in the only real community that students know. On the face of it, at any rate, *n Aff* appears to have the edge over *n Ach*.

Parents should be able to help adolescents resolve some of their conflicts between *n Aff* and *n Ach*, between the world outside the school and the closed community of the school, but they themselves are emotionally involved in the problem and are often viewed by adolescents as being in league with the school to enforce unnecessary controls and to interfere with legitimate

rights and freedoms. As a consequence, there appears to be a growing tendency for parents and adolescents to become psychologically isolated from each other. Taba (1955a) observes that many young people have become so estranged from their parents that the latter do not seem like persons to them any more—"just givers, blockers, and not people who get irritated and tired and have all the human feelings." She goes on: "To some adolescents I have studied, parents are as incomprehensible as a foreign culture."

Abraham Gelfond (1952) makes a similar comment, as a result of a study of attitudes of junior high school girls:

To these girls the parent is like a monarch whose subjects seek only to understand his benevolence or hostility toward themselves and do not presume to express such attitudes toward their sovereign. . . . They can but study parental attitudes and try to fit themselves into the situation. . . .

To be popular with their own age group is of more concern to junior high school girls than almost any possible conflict with their parents. Popularity is the key to satisfactory adjustment within the peer culture. . . . Among themselves, they find two freedoms: freedom from control and freedom from protection.

The freedom offered adolescents by the peer group does not come without a price. Often the peer group exercises a dictatorship over the attitudes and behavior of its members that is more tyrannical than anything ever devised by the adult world. Nevertheless, a great many children evidently have to go through the process of submitting to group domination before they are ready to stand on their own feet and make their own decisions. It is hard for adults to understand the whys and the wherefores of adolescent behavior. When we see an adolescent engaging in behavior which seems silly or illogical but which conforms to the standards or norms of his group, we forget that he may not be psychologically free to behave differently. He is, in effect, a prisoner of the norm. The next stage in his becoming a mature adult consists of his freeing himself from the dead-level conformity to group norms that is so characteristic of adolescent society. Unfortunately, a large number of young people never attain this freedom and become adults who are unable to do their own thinking and take responsibility for their own behavior. Because they have not progressed beyond the adolescent stage of psychological development, we think of them as adults who have not matured emotionally, socially, and intellectually.

It is easy to become critical of the adolescent's need to belong and be accepted. What adults often overlook, however, is that the degree of acceptance a child receives from others is one index to his emotional health. Furthermore, both emotional health and being accepted are positively related to

Educational Psychology in the Classroom

school success. Raymond G. Kuhlen and E. Gordon Collister (1952) asked sixth- and ninth-graders to rate fellow students on a long list of characteristics. They then followed up the students in later years to see what characteristics differentiated the graduates from the nongraduates. They found that sixth-grade boys who had been rated as "friendly," "popular with others," "cheerful and happy," and "good looking," and who enjoyed jokes, even jokes on themselves, were more likely to graduate six years later than those who had not received these favorable ratings. Ninth-grade boys who graduated were more likely than nongraduates to be rated as "friendly," "neat and clean," "popular with others," "cheerful and happy," and "good looking." And the only trait that distinguished potential graduates from nongraduates among ninth-grade girls with any consistency was that of being "popular with others."

Using Sociometry. In their attempts to measure the social acceptance of sixth- and ninth-graders, Kuhlen and Collister used what is known as a "sociometric technique," a way of measuring the "social distance" or of charting relationships among group members. Another way of studying the social structure of classroom groups is that of asking each student to list the three students he would most like to work with on a committee (or sit next to, or play with, or invite to a party, and so forth) and the three he would least like to do the same things with. The choices and rejections are then tallied and charted.

Figure 5-3 shows the kind of social structure one might find in a fifth grade. Joe, Frances, and Barbara are at the centers occupy central positions in "stars" of attraction, whereas Bill, Gordon, Emily, Lucy, and Gertrude are rejected—"isolates." In some ways they are like the nursery school children who are "onlookers." Some fifth-graders are unwilling and/or unable to develop the social skills necessary to proceed beyond the "onlooker" stage. To this extent, they are socially and emotionally immature. However, the classifying of such behavior as immature does not tell us very much about it. It does not say, for example, whether these children are so painfully shy that they feel awkward in any social situation, nor does it tell us whether they are disliked by the other children or merely ignored. Usually there is an interaction of several factors: the child is diffident, shy, and withdrawn, and the other children just do not want to bother with someone who is so ill at ease. Sometimes a child is not chosen because he belongs to an "outgroup"—perhaps he is a Negro child in a white group, or a Mexican child in an Anglo group, or even an upper-middle-class child in a group of children coming from working-class homes.

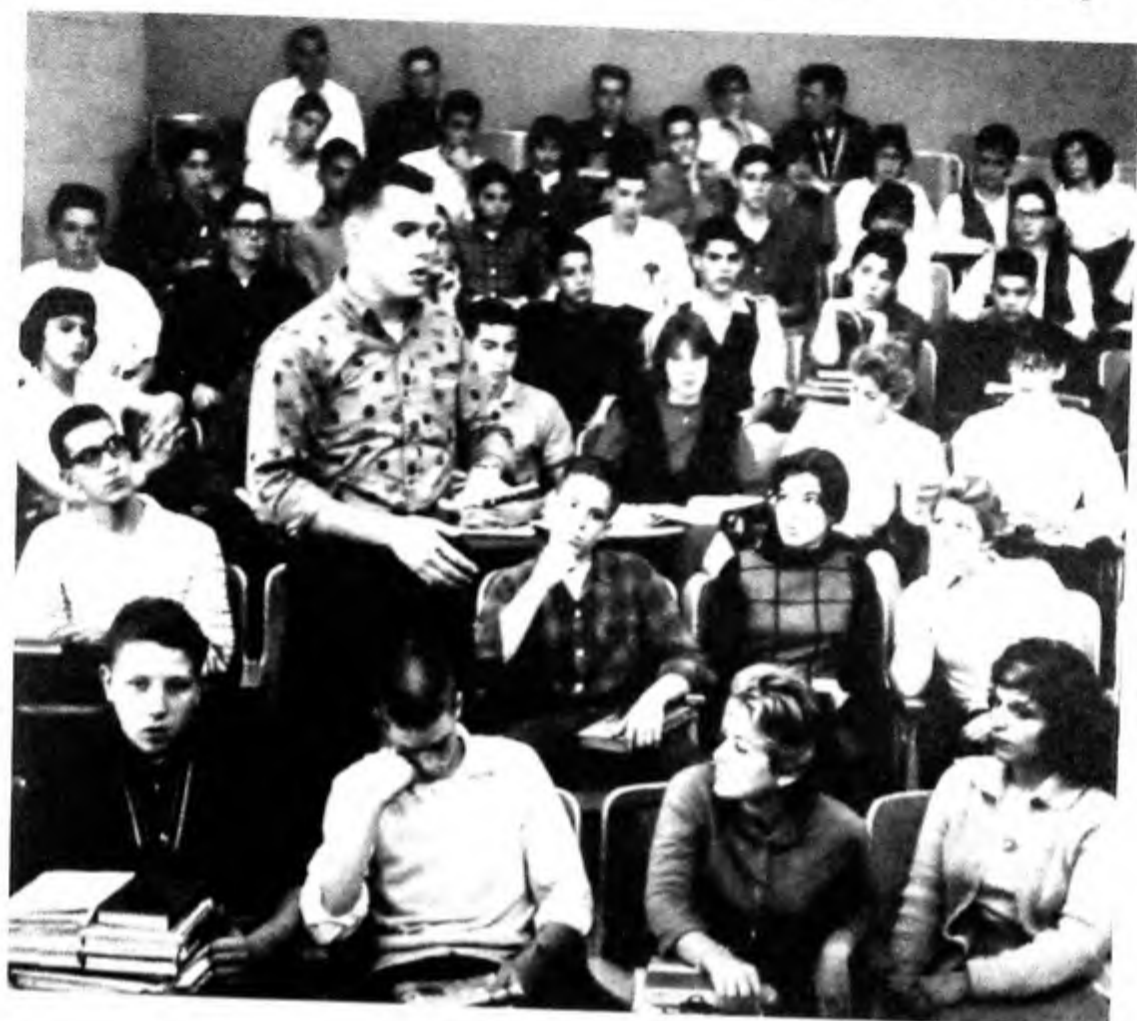
Figure 5-3 also depicts other stages of social development. George and Tom, Dorcas and Amy, Dolores and Sonya, and Ivy and Joanne represent

Educational Psychology in the Classroom

the "best pal" or paired friendship pattern. There is a "chain of friendship" among the boys that includes Bernard, Fremont, Elton, Ed, Joe, Dick, Fred, and Ferd. Generally speaking, friendship chains are characteristic of healthy group relationships because they help link a class together in friendly group spirit. The girls in this class are less friendly and more divided than the boys are. There is an exclusive clique composed of Jane, Frances, Lorelee, and Barbara, with Mary apparently included in the group part of the time. The chart also shows how boys and girls this age divide along sex lines. Only Frank expresses any liking for girls, and only two girls, Dolores and Sonya, indicate any preference for any of the boys. The boy in this case is Ferd, who is also one of the most popular boys in his group. The fact that Dolores and Sonya like each other better than they are liked by any of the other girls in the class, plus the fact that they both like Ferd, raises the possibility that they may be more physically mature than the other girls. It also raises the possibility that Ferd may be more mature than the other boys. Very likely he is mature enough to be attractive to girls, but not mature enough to be attracted in return. Frank likes girls but is not chosen by any of the boys, nor is he chosen in return by any girls. Very possibly his interests are more effeminate than those of the rest of the boys in his class.

Sociograms based on adolescent groups show these same basic patterns: "stars" of attraction, cliques, paired friendships, "chains" of friendship, and isolates. However, there is less division on the basis of sex; most of the small subgroups include both sexes, except for those who have not matured to the point of being interested in persons of the opposite sex. One phenomenon that appears during this period is the "crowd"—a group of boys and girls with more or less common interests and tastes who "hang around" together. One often sees the crowd in a soda fountain after school, or working together to elect one of their members to a school office. The crowd is more loosely organized than a clique. It is less likely to be "a closed corporation" and consists of a larger number of members.

Teachers sometimes raise the question of whether sociograms are worth the time and effort, because they feel that they can tell which students are accepted and which are rejected without the help of a special technique. However, a number of research studies indicate that teachers generally do not know their students as well as they think they do. Merl E. Bonney (1947a) asked a group of thirteen teachers to make estimates of the number of friends possessed by high school students with whom they were acquainted. He then checked their estimates against a sociometric study of the number of times the students actually were chosen as friends by other students. He found that the average teacher was 45 per cent accurate in his estimates for



Berni Schoenfield

The degree of acceptance that a teenager receives from others is one index to his emotional health.

students of high and average popularity, but only 28 per cent accurate for students of low popularity (see Table 5-1). Norman E. Gronlund (1951) made similar findings in the course of his study of 40 teachers and 1258 children in the sixth-grade classes of Flint, Michigan, schools. He reported a tendency of teachers to overjudge the acceptance of children they most prefer and to underjudge the status of those they least prefer. Evidently the reason why teachers fail to identify children who are accepted or rejected is that they are not fully aware of the bases that children use to make choices. In effect, their difficulty is one of being unable to put themselves in the same frame of reference as children—to see things as children see them. One of Gronlund's findings is of more than passing interest. He found *no* relationship between the ability to judge a child's acceptance accurately and any of the following factors: the teacher's experience, age, years of college training, semester hours

Educational Psychology in the Classroom

TABLE 5-1. Percentage of Accuracy in Teachers' Estimates of Number of Friends Possessed by High School Students (Bonney, 1947a *)

Teachers	High-Acceptance Group	Average-Acceptance Group	Low-Acceptance Group
A	34	22	45
B	56	56	16
C	42	75	17
D	66	16	35
E	33	77	44
F	50	19	35
G	19	66	16
H	28	54	55
I	50	71	13
J	58	40	40
K	57	50	7
L	56	38	20
M	36	50	29
Average	45	45	28

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of education courses, size of class, marital status, and length of the time she had been in contact with the class. The only criterion that differentiated the best teacher-judges from the poorest was whether they had taken an in-service, child-development course set up for the purpose of helping teachers to understand the "whole child," with particular reference to his social adjustment. Teachers who had taken this course were significantly better judges than those who had not. However, as Gronlund pointed out, it would not be fair to say that taking such a course is the crucial factor, for it could be that those teachers who were interested enough to take such a course would also be the teachers best able to judge the social acceptance of children more accurately.

The ability of teachers to judge the degree of social acceptance enjoyed by their students does not exist independently of other skills. A study by Gronlund and Algard P. Whitney (1958) found that fourth-grade teachers who were more accurate in judging the sociometric status of their pupils also tended to be more accurate in judging pupils' intelligence.

A number of other studies point to a relationship between sociometric status and emotional adjustment. The study by Kuhlen and Collister, discussed a few pages back, found that students who had the highest degree

of acceptance also tended to have the fewest scholastic problems. Merl E. Bonney (1947*b*) did an intensive study of the 5 most-accepted and the 5 least-accepted children out of a total group of 92. He found that the 5 least-accepted children had more emotional problems both at home and at school, and that 3 out of the 5 came from broken homes. None of the 5 most popular children came from broken homes. The average IQ of the 5 most popular children was 112; it was 90 for the 5 least popular. Mary L. Northway (1944) studied the 20 least-chosen children out of 80 fifth- and sixth-grade pupils. She found that they tended to be of three main types: quiet, retiring, socially uninterested children; listless, recessive children; and noisy, rebellious, socially ineffective children.

Deborah Elkins (1958) reports further confirmation of the relationship between sociometric status and school success. She asked ninety eighth-grade students attending school in an industrial area to whom they would like to sit near during study-hall periods. As Table 5-2 shows, there was a high relationship between sociometric and educational status. Sociometric status was also related to the socioeconomic status of parents, the degree of satisfaction expressed by the parent regarding the child, and the number of out-of-school activities engaged in by the child. In reviewing her findings, Elkins questioned whether schools are doing enough to help children from lower socioeconomic levels to become integrated into the social life of the school. Perhaps some of the educational problems of these students could be solved if they were helped through more active social participation to develop more favorable attitudes toward the school.

The extent to which both intelligence and social class are related to sociometric status is shown by a survey conducted by Merrill Roff of the University of Minnesota and S. B. Sells (1965) of Texas Christian University. Roff and Sells asked each one of some 2800 fourth-graders in Minnesota and Texas

TABLE 5-2. Relationships between Sociometric Status and Educational Achievement among 90 Eighth-Grade Students from Lower-Middle and Upper-Lower Class Backgrounds (Elkins, 1958)

	Educational Achievement	
	Percentage below Grade Level	Percentage above Grade Level
Most chosen children	10	57
Least chosen children	53	10

schools to nominate four classmates they liked most and two they liked least. By using an electronic computer to process their responses, it was possible to determine a choice-status score (number of like-most choices received, less the number of like-least choices received) for each child. Students were then divided into four equal-sized groups according to their socioeconomic status, and those with very high-choice status (approximately the highest one sixth) in each group were compared with those who had very low-choice status (approximately the lowest one sixth) with respect to IQ. Their results, as presented in Figure 5-4, show that children who are most often chosen by their classmates tend to have higher IQs than those who are least chosen and

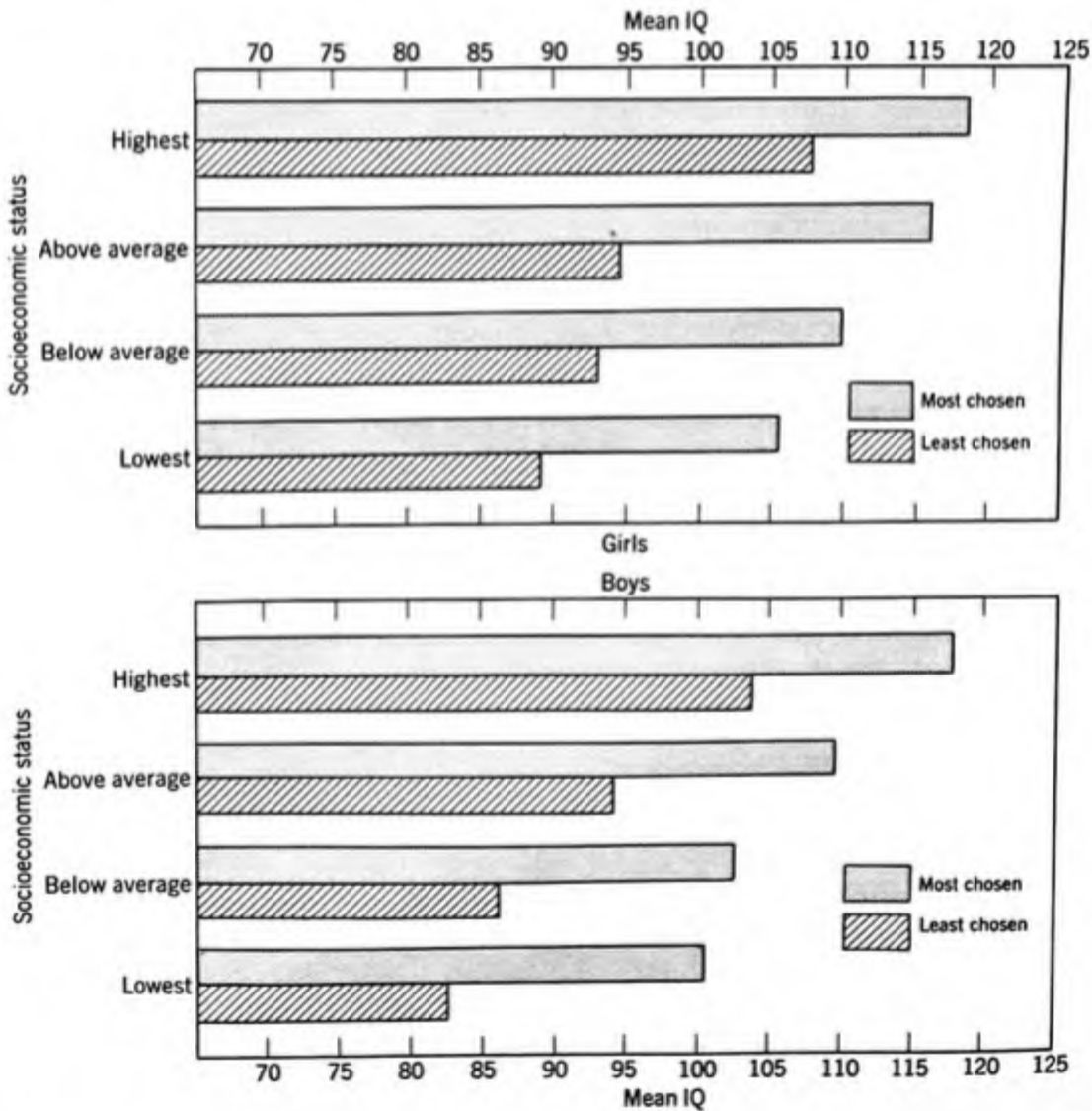


FIGURE 5-4. The IQs of most-chosen and least-chosen fourth-graders classified according to their socioeconomic level. (Roff and Sells, 1965.)

that this difference holds true irrespective of their socioeconomic class. The data also show that the higher a child's socioeconomic status, the better chance he has of being chosen by his classmates. However, note that seldom-chosen children with high socioeconomic status tend to rate lower in IQ than oft-chosen children of moderate socioeconomic status. This tendency is most marked with girls.

There seems to be a common factor running through a number of the studies that we have discussed in this chapter and the preceding one. The student who has a low degree of acceptance by his classmates tends also to have more emotional problems, both at school and at home. He has less-than-average academic aptitude, is more likely to drop out of school early, participates in few extracurricular activities, and is more likely to come from a lower socioeconomic class than most of his classmates. The student who has a high degree of acceptance by his classmates tends to get better grades, to have a higher IQ, to participate in a variety of extracurricular activities, to have fewer emotional problems, and to come from a home that ranks higher in social status.

SOCIAL FORCES INFLUENCING BEHAVIOR

Social Norms. A few pages back we discussed the degree to which peer groups exercise an increasing amount of influence in the lives of young people as they go through the developmental stages of middle childhood, preadolescence, and adolescence. This influence is exercised through what psychologists call "social norms"—standards of conduct and behavior that grow out of the interaction of members of groups. Some norms are developed as a way of enabling members to differentiate between their group and other groups. A group of boys may wear a certain kind of fancy belt buckle—one way of expressing the feeling that they are somehow "different" from other groups. If the group has high status in the school, other boys may follow suit, and a fad is born. The ability to start a fad is an indirect measure of the status of a group. The wearing of fancy belt buckles and other odd items of clothing is but one of the more obvious of the many different kinds of norms that function to direct or control the behavior of group members. Most norms are much less apparent but are nevertheless effective. For instance, take the norm that "no one tattles."

When Miss Skelly left the room, she said she would be back in twenty minutes and she asked the class to read through the next chapter. Jerry read through the chapter in five minutes and looked about for something to occupy his attention. He got up and wandered about the room. Miss Skelly had left one of the top

Educational Psychology in the Classroom

drawers of her desk partly open. It intrigued Jerry's curiosity and he pulled it open. There was nothing in it but papers and record books, so he closed it and opened another. There was nothing in that one but Miss Skelly's lunch. He was just opening a third drawer, when he heard Miss Skelly's high heels clicking down the hallway. He shut the drawer, scurried to his seat, and buried his nose in the textbook.

What Jerry had just done is in violation of the code of behavior enforced by adults, which says, in effect, "You don't go through another person's desk." Twelve-year-olds are not bothered as much by such behavior, but they know what adults think of it. But when Miss Skelly returned to the room, no one mentioned what Jerry had been doing. If anyone even thought of telling on Jerry, he choked back the impulse. The norm is that you do not "tattle," and few children this age seriously consider doing it. Hence the norm operates in the class without anyone's giving it much thought. However, if Miss Skelly should suspect that someone had been tampering with her desk and should ask the class who did it, then everyone would be conscious of the group code. And if they are like most sixth-graders, it would take much pressure to get them to tell. Even those who might want to tell would think twice for fear of running counter to the group norm.

The development of norms is one of the ways the group develops a feeling of identity and "belongingness." Sometimes social norms help to protect the members of the group, as we saw in the incident just described. But they also serve to identify the group, to help set it apart from others. Norms are a way of expressing the consciousness of the group as a group. During the late 1920s and early 1930s it was the custom for male students in high schools and colleges to wear corduroy trousers, the dirtier the better. It was their badge of being a student. Perhaps it was a kind of a defiant gesture against the standards of cleanliness and neatness that prevailed in the adult world. In any event, it was one of the ways in which students used to tell the world that they wanted to be recognized as a group and to tell themselves that they had something in common.

It is the norm among many groups of preadolescent boys that no one may have anything to do with girls, except, perhaps, to tease them. A boy who defies this norm runs the risk of being ostracized and becoming the target for teasing and practical jokes. Gerald H. J. Pearson (1952) describes a rather typical situation:

A boy of thirteen was deeply in love with a girl in his classroom. The love affair was a fantasy one as is usual at this age, and he expressed his feelings only very occasionally and, in private, to the girl, who only reciprocated slightly. He did express his feelings of love through writing verse, which he never showed

to her or to anyone. One day a friend of his found the book in which he kept his poetry and read a verse or two aloud mockingly. The author became overwhelmed by shame and embarrassment and was for several days tormented by these feelings to such a degree that he was unable to do any of his school work.

The norms that develop in a school can also have a very pervasive effect on the attitudes and values of students. Only 20 per cent of the graduates of McCloud County High School go on to college, even though the mean family income in the county is higher than the national average. In some ways, this is not too surprising, inasmuch as graduates of rural high schools are less likely than are urban high school graduates to think of entering college. But at Monroe County High School, also located in a rural area of comparable economic status, over half the graduates enter college. A norm has developed at Monroe High School that "everyone goes to college if he can." To be sure, this is a norm that must be endorsed and supported by the families who pay the bill, but equally important is the acceptance of college-oriented goals on the part of the high school students who have taken their cues from a faculty that assumes, as a matter of course, that every Monroe graduate who has the ability will attend college. The way in which schools develop different normative patterns of attitudes has been studied by Alan B. Wilson (1959) who found rather marked differences as to educational values among the male student bodies of each of eight high schools. It appeared that the norms in each school tended to modify attitudes symmetrically. This is not to say that any high school faculty that decides to manipulate or revise student norms will find the task easy or even possible. For one thing, there is the problem of gaining access to student groups and being accepted by them. But inasmuch as group norms influence individual attitudes, and attitudes influence behavior, it follows that the faculty that wants to have some positive influence on the behavior of students must recognize and accept the importance of group norms.

The Relationship of the Teacher to the Classroom Group. Adults are often worried and concerned when young people develop strong peer-group loyalties. They are concerned because such ties may help reinforce youth's unwillingness to conform to behavior standards prescribed for it by parents and teachers. Furthermore, it appears easier to deal with one defiant young person than with a whole group.

There is some real basis for these concerns. It is true that young people who want to defy adult authority gain support and reassurance from the feeling that they are members of a group and that the group stands with them. It is not necessarily true, however, that it is easier to deal with classes that are merely loose collections of individual students than it is to deal with

Educational Psychology in the Classroom

close-knit groups. There are some approaches that work very well with groups, just as there are some that work well with individuals away from the group setting. What sometimes happens is that teachers who have had some success with individual students try to use the same appeals and methods in working with the classroom group and meet with disappointment. Actually, the relationship between a group and a teacher is different from the relationship between a teacher and an individual student. Teachers forget, too, that classroom groups are not as a rule mere collections of individuals but have personalities of their own. People behave differently in groups than they do when alone. The boy who may be able to cooperate with the teacher when the two of them are alone may have a need to show off when he is with the class. The girl who may be able to talk sensibly when she is with the teacher may be tongue-tied with anxiety and fear when she faces the class.

Because teachers are inclined to think of the one-to-one relationship of the teacher and the pupil, they are likely to overlook the fact that groups have a separate psychological existence, and that certain aspects of group psychology may be used to the educational advantage of the student. The development of group relationships is an important phase in the social and emotional development of children; furthermore, it makes sense to use the natural drives that attract children to group life as a basis for classroom learning. In other words, teachers need to learn how to work *with* groups, rather than against them.

The need for teachers to work *with* groups, instead of against them, becomes doubly important when we recall that group norms have a greater influence on the attitudes and beliefs of children, hence on their behavior, than do expectations and admonitions of adults. Rae Carlson (1963) asked a group of sixth-graders what kind of a child they would like to be and found that their "self-ideals" were closer to the typical "self-ideal" of other sixth-graders than it was to the ideal child as described by their parents. She concluded that peer norms carried more weight with children than did the expectations of their parents. Another study along the same lines, conducted by Ruth W. Berenda (1950), suggested that children were more influenced in their judgments by the alleged opinions of other children than they were by the opinions of their teachers.

Some of the ways in which teachers can work with groups are presented in later chapters, but in order to give one example of what we mean, let us consider the matter of norms. One of the broader objectives of education is to help students think, examine their own behavior, reevaluate it, and improve it. Teachers can assist in the social development of students by giving

them chances to explore and to discuss their own behavior. As we indicated earlier, groups often are not even aware that they have any norms. By helping students become aware of their own norms and to examine them critically, teachers can sometimes help them to develop more adequate behavior. Chase Dane (1950), writing from his experience as a student council sponsor, describes how the student government in one high school undertook the problem posed by a campus littered with luncheon debris. After trying out several proposals without much success, the council adopted a plan whereby the entire student body would have to stay after school the number of minutes it took the custodians to clean up the school yard. Although the plan was quite drastic, the student body voted for it and it went into effect. As a result the campus was cleaner than it had been for years. Once students had recognized the problem and worked it through, they were able to modify their own behavior and develop new norms.

The Importance of Communication to Sound Group Relations. The extent to which a teacher can help students develop genuine insight and understanding regarding their own behavior as individuals and as a group depends to a great degree on the effectiveness of classroom communication. Good communication is needed if students are to understand what they are doing. They must be able to consult with the teacher and with each other, to ask questions and to clarify difficult points, and to express ideas and feelings. We commonly think that establishing and maintaining satisfactory communication with children consists of getting children to understand what *we* are saying. We tend to overlook the importance of our understanding what *children* have to say. Furthermore, the children's need to communicate to one another is almost as important to them as communication between child and teacher. Classroom communication is ineffective if the teacher does all the talking. Good communication requires that there be interaction: some talking and some listening. The teacher who cannot or will not listen is a teacher who cannot communicate effectively. And a teacher who is doing an effective job of communication will do more than merely listen, because not all communication is verbal. After all, a great deal of what we have to communicate to one another cannot be put into words. This is particularly true of feelings and attitudes, which are usually expressed by gestures, facial expressions, turning of the head, posture, sighing, giggling, and in a hundred or more other ways. Sometimes the actual method being used to communicate defies classification. For example, a skilled observer can tell a great deal about the attitudes children have toward their school (as well as the attitudes the school has toward children) by watching them pass in the hall.

Cohesiveness. A classroom group that finds it has good communication

with its teacher and among its members will enjoy being together. It will find working, learning, and playing together a rewarding and satisfying experience. This wanting to be together with the other members of the group is what we call "cohesiveness." Cohesiveness is also characterized by such feelings as loyalty, group pride, and the "we" feeling. Cohesiveness facilitates communication among group members, whereas lack of cohesiveness impedes it. A group may lack cohesiveness because members are so interested in their personal goals, needs, and feelings that they cannot become interested or involved in group goals. Groups of preschool children lack cohesiveness because they do not have the maturity needed to submerge some of their interests in deference to group goals. A lecture or theatre audience tends to lack cohesiveness because there is little basis for developing any kind of a group feeling. To the extent that a classroom group plays the part of an audience for the teacher and regards itself as an audience, it lacks cohesiveness. Classroom groups in European schools, where education is conducted on a formalized, teacher-centered basis, are likely to be much less cohesive than are comparable groups in American schools.

Cohesiveness can also be impaired by sharp cleavages between subgroups within the larger group. Hilda Taba (1955a) points out that when school populations contain groups from various social classes or cultures, there is a tendency for "we-they" relationships to develop. Under such circumstances, classroom discussion may be impeded, because students have a tendency to attack one another instead of ideas, and any possibility of doing any thinking or planning as a group is blocked. Hence she argues for a greater understanding of the factors and forces that cause group cleavages and the ways in which they become obstacles to communication, to group participation, and to learning in general.

Morale. It can be assumed that groups that are operating effectively probably have good morale as well. This holds true whether the groups are army units, factory workers, or students. Most people are aware, too, that morale usually has something to do with happiness. It is because of this association that military commands provide entertainment for their troops and factory managements help workers organize bowling teams. There is no doubt that entertainment does help take people's minds away from the monotonous, tedious problems that are inevitably part of working and living with others, but morale is much more than being entertained. For example, the U.S. Army discovered during World War II that the morale of enlisted men varied with what they thought of their leaders and with their proximity to the front lines of battle. The closer the unit was to the front lines, the better opinion the men had of their leaders and the better the morale (Information

and Education Division, 1947). Daniel Katz and Herbert Hyman (1947) studied the records of various shipyards during World War II and found that there was no relationship between employees' morale (as measured by production) and the difficulties they experienced in their daily lives: poor housing, difficult transportation, and the like. One of the facts that *was* related to their morale was the amount of confidence that workers had in the shipyard management. Such findings would seem to suggest that classroom morale might also be related to the amount of confidence that students have in the teacher, as well as to their progress in learning.

The cultivation of morale, like any other dimension of mental health, cannot be based on a formula. However, everyday observation would show that teachers who have the best morale in their classes are those who have a considerable degree of optimism that students will learn something in their classes. They are, in other words, optimistic about the possibility that learning will take place. Such teachers expect to commit themselves to the task of teaching and expect that students are going to commit themselves to the task of learning. They maintain this optimism in spite of occasional (or even frequent) setbacks and failures. They have a toughness of fiber that students respect. Under the guidance of such teachers, classes get the feeling that success *is* possible and that the goals of learning *can* be attained. Sometimes the goal is a personal one, as it is with Tommy Flores, a fifth-grader who is struggling with fractions. Fractions are a confused jumble of numbers to Tommy, but he persists in his efforts because he knows from past experience with other school tasks that after a while they will make sense. He also knows that Mrs. Mark, his teacher, will help him with some of the difficult points. Furthermore, he knows that neither she nor any of his classmates will ridicule him for the mistakes he makes while learning.

Morale can also involve group goals. The military unit that is isolated on the front lines, cut off from the rest of the division, fights doggedly because of its loyalty to the cause and to the total military organization. If its members lacked faith in the cause or thought that the war was lost anyway or that further struggle would serve no useful purpose, they would not resist, but would surrender. The boy who makes a sacrifice bunt at baseball is in a similar position. He knows that he will probably be "out at first," and that the thrill of coming in safe at home plate will not be his this inning, but the sacrifice will put his team in a more strategic position for scoring.

Good communication, cohesiveness, and morale are both causes and effects of satisfactory group activity. They are forces that work together to support the kinds of satisfactions that come from working and learning together. Conversely, a group that is discouraged or bored or apathetic will resist the

Educational Psychology in the Classroom

efforts of a teacher to improve interpersonal relations within the group. It is not easy to build up the morale of a group whose attitudes are negative and resistive; yet it is an assignment that must be carried with some degree of success if any genuine learning is to take place.

The Emotional Climate of the Classroom. In the last chapter we discussed some of the ways in which the emotional climate of the home affects child behavior. Emotional climate, in fact, sets the conditions of behavior for any group. Follow a junior high school class as it goes from teacher to teacher in the course of a school day and note how differently the same class reacts and behaves as it enters the "climatic zone" of each teacher. With one teacher the class may be restless and fidgety; with another, noisy but enthusiastic and industrious; with still another, subdued and passive. In some classrooms the atmosphere is critical and negative. No one can do anything right. Every defect, every deviation from the prescribed pattern is noted and called to everyone's attention. In another classroom, everything is acceptance and agreeableness. No one ever makes a mistake, it seems, and the class meanders cheerfully, if somewhat hazily, through the prescribed curriculum. In still another class, the climate is one of high-pitched tension. The teacher is more like a ringmaster, putting students through their acts with military precision. One gets the impression that everything has been planned almost to the second.

Although climate is compounded of the personalities of the group and the teacher, it is the latter who is most responsible for the kind of climate that develops in the classroom. It is the teacher who can reward or punish, who can set and enforce limits rigidly, flexibly, or not at all. It is to the teacher that students look for cues that set the prevailing mood.

However, when we say that the teacher is the key figure in creating climate, this does not mean that the teacher has unlimited freedom and responsibility to develop the kind of climate that he thinks is appropriate or that suits his personality. There are other potent forces at work. For one thing, the administration of the school plays an important part in developing the psychological climate that prevails generally among the teachers and the students in the school. Hence a teacher will have great difficulty in developing an autocratic climate in a classroom when the prevailing climate in the school is democratic or laissez faire, just as the teacher who tries to build a democratic climate will have difficulty if the prevailing climate in the school is autocratic or laissez faire.

*

The Effects of a Competitive Climate. We have spent the last few pages discussing the forces, conditions, and factors that help to develop the kind of group attitudes and behavior that aid and support classroom learning.



Audio-Visual Services, Alameda County Schools

Teachers can easily turn the learning situation into a competitive one by arousing students' anxieties, but creating a cooperative climate takes patience and understanding. Many skills, particularly those that require close collaboration, can be learned only through cooperation.

However, we should also be aware of reasons why groups disintegrate or fail to develop "group feeling."

We have mentioned one factor already: the tendency of teachers to regard classroom groups as collections of individuals rather than as groups. Furthermore, some teachers deliberately prevent students from developing "group feeling." They use such methods as refusing to let friends work together on the same committees, forcing students to report one another's breaches of conduct, and pitting students against one another in intense competition. Indeed, the development of a tense, competitive atmosphere does much to break down good group relations in classrooms. Competition is very much a part of our national life, and we could not keep it out of the schools if we tried. Many children, particularly in the lower social classes, need to learn how to work within the framework of a competitive system without being



"I beat! . . . I beat!"

Stamaty, The Christian Science Monitor. (Reproduced by permission.)

One of the major tasks of the school is that of helping students learn to work together cooperatively. Sometimes this means unlearning inappropriate patterns of competitive behavior.

continually defeated and discouraged by it. If competition is properly controlled, it can help make learning an interesting and stimulating experience, but if it is emphasized to the detriment of other goals, such as that of learning how to work together cooperatively,¹ it can break down group spirit and morale.

One of the difficulties about the practice of encouraging unbridled competition in the classroom is the way in which it interferes with the learning of attitudes and skills that are basic to cooperation. As Alexander Mintz (1951) put it, "once the cooperative pattern of behavior is disturbed, cooperation

¹ The point should be made that "cooperation" as used in this book means "the ability to collaborate with others in working on a task, problem, or project that is of common interest to the persons involved." Cooperation implies a kind of partnership, a certain equality among the collaborators. Some teachers and parents think of cooperation as synonymous with "obedience" or "compliance," a concept that is quite different from the idea of group sharing and equality implied by the use of the word here. This tendency was brought out in a study by Marie M. Hughes (1950), who found that teachers were inclined to interpret "cooperate" to mean "follow instructions"—that is, to obey the teacher and to follow teacher-set patterns—thus excluding the possibility of goals shared with the group.

ceases to be rewarding to the individuals; then a competitive situation is apt to develop which may lead to disaster."

Mintz bases this conclusion on an experiment he conducted which involved the attempts of groups of individuals to pull paper cones from a bottle by the means of strings attached to the small end of each cone. The mouth of the bottle was large enough so that one cone at a time could pass through. When the members of the groups were encouraged by means of rewards and fines to compete with one another, they were unable to engage in the cooperative endeavor needed to carry out the assigned task. The cones all jammed in the mouth of the bottle, with the result that no one individual was able to extricate his cone, even though all individuals had previously been able to extricate their cones successfully in a trial that was not competitive. The point is that cooperation is a rather difficult complex of skills that cannot be easily brought into play if competition is introduced into the situation.

Another experiment was conducted by Martin M. Grossack (1954), who gave small groups of college students a problem that could be solved only by writing messages. Some of the students were told that their performance would be rated as a group; others were told that their performance would be rated as individuals. Grossack reported that the students working under cooperative conditions (rated as a group) showed significantly more cohesive behavior and communicated more effectively than did students motivated to compete with one another (rated as individuals).

Still another study of behavior in small groups, conducted by William Haythorn (1953), produced similar results. Haythorn reported that cooperativeness, efficiency, and insight aided the functioning of the group, but that "striving for individual prominence" (a form of competitiveness) reduced cohesiveness and friendliness and interfered with the smooth functioning of the group.

The problem of what to do about competition is an extremely complex one. The schools are under a great deal of pressure to teach children to compete and to stress the competitive aspects of education, because, as is so often pointed out, this is a competitive world. However, people who put such pressures on the schools generally overlook the fact that the children usually have learned many of the techniques of competition before they enter school (they have learned to compete with their brothers and sisters, for example), and that many school practices (such as the giving of grades, honors, and other forms of recognition) already encourage a high degree of competition. There is no reason, as Fred T. Wilhelms (1953) pointed out in a speech on the subject, for the school to be *more* competitive than life outside the school,

yet that is what critics seem to be demanding. Furthermore, the skills of cooperation are far more crucial in today's world than are the skills of competition. Indeed, the survival of the civilized world will depend, in the final analysis, on our ability to learn to cooperate more effectively and to teach others how to do so. Competition is a more primitive and less mature approach to human relations than is cooperation. Rudolf Dreikurs (1957) describes what happens to the child who has been trained to compete and to feel inferior if he does not excel:

A child who tries to excel and to gain his status through approval, admiration, and praise seems to be the ideal student. However, his goal is unmistakably self-elevation, not cooperation. Such children often fail miserably in life when they do not receive praise and recognition, because actually they are self-centered and work only for their own glory. They cannot cooperate if they do not shine. . . .

The overambition instilled in children easily becomes a handicap when the child meets a situation where he must take his part without any chance to excel. He then either loses interest and withdraws from participation or becomes tense, anxious, and ineffectual. If he has no opportunity to excel anywhere, then he may turn to destructive means of getting attention. . . . A competitive spirit in school fosters the idea that one studies mainly to be ahead of others. A competitive society reveres those who succeed in their self-elevation, and fills its mental hospitals and jails with those who gave up. The teacher is in a position to stimulate or discourage in children such mistaken concepts of the meaning of social living.

Teachers sometimes defend an emphasis on competition on the grounds that it stimulates effort and thus produces greater gains in learning; however, some research by Lee Sechrest (1963) shows that such gains may be limited to the student who is thus rewarded and that this advantage may be cancelled out by performance losses on the part of other students. His experiment showed that praising the performance of one member of a pair of children improved the performance of the praised member, but not that of the unpraised member. Incidentally, when one member of a pair was criticized in the experiment, his performance worsened, but his partner's performance improved. In an intensely competitive classroom students are more likely to feel devalued than praised, because no matter how well they do, the teacher implies or actually states that they could have done better. The student who is making average or even above-average progress is made to feel inadequate because he is not at the head of the class. Under intense competitive pressures, even students who are normally trustworthy may resort to such devices as copying term papers from encyclopedias, using the work of other students, cheating during examinations, and stealing or destroying one another's work.

Prejudice. We spoke earlier of the tensions that divide cultural subgroups and interfere with communication, cohesiveness, morale, and cooperation. These tensions often appear in the form of the prejudices that different cultural, ethnic, or religious groups have for one another, and that are based on some form of discrimination. Such discriminations are not inherited, as is popularly believed, but are learned. The first-grader who plays after school with a child of the "wrong" ethnic group or social class is reprimanded by his family: "Now I don't want to catch you playing with those children again. They're dirty (or they cheat, or they'll teach you the wrong kind of things)." Or the child learns how his family feels about other ethnic or religious groups by the offhand remarks made around the dinner table. In investigating some of the ways children learn to be prejudiced, Donald L. Mosher and Alvin Scodel (1960) measured the degree of ethnic prejudice expressed by sixth- and seventh-grade children in Ohio and found that it was significantly correlated with the degree of prejudice expressed by the children's mothers. They also found that prejudice in mothers was correlated with authoritarian practices in child rearing—that is, the stricter the mother, the more likely she was to show a high degree of prejudice.

Prejudice appears to have its major growth during the preadolescent stage of development, a period marked by an increase in negative behavior for many children. During this period much of the thrill of learning experienced during the primary grades has worn off, and school subjects begin to become more abstract and complex. Children of this age are beginning to learn the techniques and advantages of forming groups. The strengths that they discover in these groups enable them to defy the adult world more effectively, at a time when adults are increasing pressures to conform to adult expectations and norms, to take on new responsibilities, and to learn ways of applying the basic skills. Preadolescents express as much of their frustration and hostility as they dare toward adults, but there is much they cannot express, perhaps because of their fear of adults and their anxiety about jeopardizing major sources of love and security. Under such conditions it is perhaps natural for them to turn on other children in their attempt to find outlets for some of this unexpressed hostility. And it is particularly natural that they should turn against those children who are most vulnerable—children who are less able to defend themselves. Children from minority groups or from lower-class homes form convenient targets for such attacks.

The prejudice that we find in our classrooms thus comes from two main sources: first, the values and attitudes that students learn from others and, second, the tensions and frustrations experienced in coping with others, particularly with adults. The frustrations arouse hostile feelings; the means for

Educational Psychology in the Classroom

expressing these hostile feelings are learned. Although children are notoriously cruel to one another, much of this cruelty is learned from adults.

Prejudice is a disruptive force. It arouses anxieties and tensions that interfere with the attainment of all positive social goals, including those of the school. As children who are the targets for prejudice learn how others feel toward them, they feel humiliated and inferior. They encounter unusual difficulties in their attempts to meet psychological needs for status and self-esteem. They tend to react to these frustrations in one of two ways: either they become apathetic, submissive, and inept, working far below their real potentials, or they become aggressive, rebellious, hostile, and competitive. Neither orientation is conducive to mental health, cooperative group relations, or effective learning. Nor are children who generate prejudice immune from the effects of their prejudice. It is highly questionable whether a child can devote his best talents and energies to the task of achieving some of the broader goals of education—understanding of himself and others, learning to think for himself, learning to develop cooperative relationships with others, and developing a pattern of democratic values—if his attention and energy are directed into generating and expressing hostility toward children of other ethnic or religious groups, and if his concepts of life are so rigidly predetermined. Because of the many ways in which prejudice disrupts and disturbs effective learning, it is difficult to see how teachers can ignore this threat.

A study by Marvin D. Solomon (1951) indicates some of the ways in which prejudice is related to learning difficulties. He found a relationship among three factors: prejudice, rigidity in thinking, and the inability to use the scientific method in dealing with unfamiliar problems of an academic nature. In other words, those persons who were the most rigid in their thinking also tended to be the most prejudiced and were least able to apply scientific methods to the solving of problems. According to Solomon:

The rigid individuals seemed to show the inability to go beyond the mere factual information at hand in their attempt to solve a problem. They react on the basis of each individual fact separately. The rigid group [of students] does not indicate the ability to see a relationship of one piece of factual material information to others. The individuals of the rigid group may even refuse to consider some of the facts at their command.

The nonrigid individual, on the other hand, has the ability to see and to state the relationships existing and necessary for the correct solution of a problem. . . . [He] can take the individual facts under consideration and organize them into a single unified structure. The thought processes are broad and integrated and take all of the pertinent facts into consideration in arriving at a solution to the problems.

The antidote for prejudice is what is commonly termed "intergroup education," a process which, according to Jean Grambs (1952), has three facets:

One, it involves looking at the social groups of which one is a part, and understanding how and why society elected to designate certain groups as it does. Two, it means to look at the friendship groups among peers, assessing what group membership here means, what the groups stand for, and the skills in group belonging that are vital. Three, it means guiding individuals in groups so that group formation does not involve destructive intergroup friction, but rather produces acceptance and friendship between groups, and challenges each group to even better efforts.

All schools have a responsibility for helping students develop better intergroup relations. The fact that children from such diverse cultural groups come together in the same classroom is bound to create tensions, but, as Grambs points out, there are ways in which the very presence of socially destructive forces can be used as a basis for instruction in positive attitudes toward others. Actually, many schools already are providing a socially "cementing" influence by promoting interaction among children from different social groups who ordinarily would not get to know one another. In a study of the children in one school system, Celia Burns Stendler (1949) discovered that 76 to 89 per cent chose friends from their own social class when they were outside of school, whereas at school only 35 to 41 per cent limited their friends to their own social class.

The problems that produce prejudice and the problems that prejudice causes are very complex. If prejudice were a temporary phenomenon, occurring only in childhood and adolescence, it would be serious enough, because it causes untold misery and discouragement. But the prejudicial patterns learned in childhood are usually retained in adulthood, blocking communication and causing dissension among large groups of our citizens, preventing cooperation, and aggravating crime and other forms of vicious behavior. The school that attempts, through intergroup education, to reduce or eliminate prejudice (even assuming that community opinion is agreeable) has a difficult task, for prejudice is a way of life. No one is completely free from prejudice, not even the people who are its chief targets. However, the methods that seem to work effectively in the reduction of prejudice are the same methods developed by teachers in recent years as the best ways of meeting the emotional and social needs of children. In other words, if children in the classroom are free to communicate on a wide variety of subjects and issues, do not have to function in a fiercely competitive climate, are helped to work together cooperatively, work and play in a democratic atmosphere, and are given sufficient freedom and help to make their own

decisions within the range of their capabilities, then we should be able to make real progress in reducing some of the hostility and anxiety that makes prejudice so prevalent.

SUMMARY

The need to relate to others is basic to a great deal of human behavior. Without some kind of positive relationship to other people, we are "nobody." We are dependent on others not only for the development of our self-concept—"who we are"—but even for the satisfaction of our most basic needs. The family group helps satisfy these needs at first, but as children grow and develop through each of the various stages of maturity, they become less dependent on the family and more attached to persons outside the family, particularly to their age-mates or peers. It is often difficult for adults to accept this shift in dependency, because it interferes with certain needs of their own to direct and control children.

A child's relations with others his own age pass through several fairly well-defined stages that may be observed, for example, in his patterns of play. Preschoolers tend to be highly self-centered; really strong attachments to others and to groups do not generally appear until the middle years of childhood. These attachments commonly take on the nature of the "best pal" arrangement at first and then blossom into larger friendship groups. The extent to which children are able to affiliate themselves with friendship groups is a rough measure of their psychological maturity. Those children who are not accepted tend to be less well adjusted, both emotionally and academically. During adolescence, the peer group assumes its greatest significance, often maintaining a tight grip on the attitudes and behavior of its members. The attractiveness of the peer group is partly the result of the need for affiliation (*n Aff*), which may come into conflict with the need to achieve (*n Ach*). This problem is further aggravated by the fact that adults, who could be of help, often become psychologically and socially isolated from adolescents.

One of the most effective ways of studying the psychological forces at work in the classroom group is the sociogram—a way of charting the patterns of acceptance and rejection that students feel toward one another. Preferences expressed sociometrically have been found to be related to academic ability, mental health, and social status.

Groups commonly develop feelings of identification among their members by establishing norms for conduct. Sometimes these norms encourage or permit behavior that is contrary to adult standards. Whether or not high school

graduates will attend college is determined to a high degree by group norms. Hence it is understandable why teachers and parents might have misgivings about the desirability of students' becoming involved in the activities of group life. Yet the psychological needs that attract children and adolescents to groups are natural and strong, and it is more sensible to work *with* these needs rather than *against* them. Teachers can help develop an adequate and satisfying emotional climate in their classrooms by clearing channels of communication, thus making two-way communication between student and teacher a real possibility and promoting better communication among students. A group whose members can communicate effectively among themselves is more likely to develop cohesiveness and good morale. A condition that endangers good group climate in the classroom is the overstress on competition that is so prevalent in schools. An effective group is characterized by its ability to develop cooperative attitudes among its members and to hold competition at a minimum.

Another disruptive force is prejudice. It may lead to hostility and other kinds of aggressive and disruptive behavior or may lead to apathy and listlessness. Prejudice is a pattern of behavior which children learn from their elders and which is fostered by misunderstanding and frustration. Attempts to eliminate or reduce prejudice through what is termed "intergroup education" involve helping children develop a better understanding and acceptance of themselves and others.

SUGGESTED PROBLEMS

1. List some of the social groups in which you hold membership (that is, your family, the student body of your college, etc.). What are some of the ways in which these groups affect your behavior without your ordinarily being aware of it?
2. Observe a group of preschool children on a playground for a period of fifteen minutes. At the end of each minute, jot down the number of children falling into each of the categories listed by Parten in Figure 5-1. Do a similar observation of older children and compare the results with your observation of preschool children.
3. Construct a sociogram based on choices made by children in a small group with which you have contact: Scout troop, neighborhood playground group, Sunday school class, or the like. Discuss the implications of your findings. (*Note:* Be sure to keep your data confidential; you can avoid hurting the feelings of children by not discussing choices with the participants or their parents.)

Educational Psychology in the Classroom

4. What norms are prevalent among the friendship groups on your college campus? What psychological purposes do these norms serve?

5. Describe some of the social forces at work in a group that is well known to you. How cohesive is it? What is the level of its morale? What evidence do you have to support your conclusions?

6. What were the prevailing intergroup tensions and prejudices among the students of the high school you attended? If you were to undertake a program of intergroup education in your former high school, how would you go about starting the program? For instance, how would you get the program accepted by the teachers, the administration, the student body, the school board, and the community? How would you actually go about teaching intergroup education, assuming you received school and community support?

SUGGESTED READINGS

Allport, G. W., *The resolution of intergroup tensions*. New York: National Conference of Christians and Jews, 1952. A lucid pamphlet by an outstanding psychologist who probes into the nature of prejudice. One of a series of 25-cent pamphlets published by the NCCJ dealing with various aspects of prejudice and intergroup relations. Pamphlets and list may be obtained from the local offices of the NCCJ or by writing to The National Conference of Christians and Jews, 43 West 57th Street, New York 10019.

Barr, J. A., *The elementary teacher and guidance*. New York: Holt, Rinehart, and Winston, 1958. See Chapter 9, "Sociometrics."

Charters, W. W., and Gage, N. L., eds., *Readings in the social psychology of education*. Boston: Allyn and Bacon, 1963. Sections III and IV contain papers on school atmosphere and climate, adolescent values, sociometry, and the social structure of classroom groups.

Cook, L., and Cook, E., *Intergroup education*. New York: McGraw-Hill, 1954. Deals with methods and research concerned with promoting better relations among members of ethnic and religious groups.

Douvan, E., and Adelson, J., *The adolescent experience*. New York: Wiley, 1965. A survey of some 3000 American teenagers that raises questions about many commonly held ideas about adolescence.

Gronlund, N. E., *Sociometry in the classroom*. New York: Harper, 1959. Sociometric techniques and their application to educational problems.

Jennings, H. H., *Sociometry in group relations*, rev. ed. Washington: American Council on Education, 1959. A practical pamphlet on the methods of sociometry.

Sargent, S. S., and Williamson, R. C., *Social psychology*, 2nd ed. New York: Ronald Press, 1958. One of several good textbooks available in social psychology and providing a more extended coverage of a number of topics touched on in the present chapter.

- Seidman, J. M., ed., *Educating for mental health*. New York: Crowell, 1963. See section entitled "Social development."
- Trager, H. G., and Yarrow, M. R., *They learn what they live*. New York: Harper, 1952. A study of prejudice in school children and its relationship to parental attitudes.
- Westby-Gibson, D., *Social perspectives on education*. New York: Wiley, 1965. See Chapter 6, "Socialization through group experience," and Chapter 8, "Social learning beyond the family."

6 Emotional Health and Problem Behavior



Ann Zane Shanks

Teachers' Attitudes toward Problem Behavior. Most teachers would probably agree with the statement that problem behavior interferes with the teaching-learning process. Many a teacher has had to bring class discussion to a halt so he could attend to a student whose disruptive behavior was interfering with the orderly progress of the instructional period. Even students whose behavior problems are not disruptive in character may have a disturbing influence. A boy who is so excessively shy that he cannot make any presentation to the class is likely to absorb more of the teacher's attention than the average student does. The girl who will not or cannot participate in group activity creates problems in a classroom whose activities require the cooperative interaction of students in small groups. In the broad sense, "problem behavior" is a term that applies to any kind of behavior that *creates difficulties* (interferes with the effective functioning of the student or the classroom group) or *reveals the presence of difficulties* (indicates that the student or the group is not functioning effectively). Hence such diverse symptoms as "chronic defiance of teachers and other persons in authority," "extreme shyness," "excessive daydreaming," "truancy," and "chronic unhappiness and depression" may all be considered to be varieties of problem behavior.

Many teachers take the position that they would rather not concern themselves with problem behavior, looking upon it as some extraneous factor that interferes with their teaching, something for which they should have no responsibility. Someone else, they feel, should handle the behavior problems that they encounter in their classrooms; hence they refer them to administrators, counselors, or parents for "straightening out." To be sure, referral of problems is often a good idea, particularly if it is done judiciously, after considering such factors as the probable effect on the child, the person or persons best able to deal with the problem, and so forth. However, the eagerness to get rid of a problem by getting someone else to accept responsibility for it may actu-

Educational Psychology in the Classroom

ally keep the teacher from developing any understanding of what is involved and thus prevent his helping the student become a more effective learner. Even when problem students are referred to the school psychologist or some other authority outside the classroom, they usually remain in the classroom and must be dealt with there. Furthermore, a great many instances of problem behavior are produced or aggravated by school experiences or even by the behavior of teachers themselves. The opposite of this statement is also valid, of course: a great deal of problem behavior is prevented or allayed by school experiences and by appropriate attitudes and behavior on the part of teachers.

The point is that the teacher who is interested in fostering and promoting classroom learning cannot afford to ignore the mental health problems of his students and thus must have some understanding of the various symptoms of what we call "problem behavior." Not only should he know what kinds of behavior are likely to interfere with learning processes, but he also ought to know what problems should be referred to sources of help outside the classroom, what kinds he might deal with himself, and how he can understand and help students whose learning abilities are blocked or encumbered by problems of various kinds. In carrying out these responsibilities, teachers are not expected to function as psychotherapists or social workers, but primarily as persons charged with the responsibility of promoting learning.



Al Kaufman, *Saturday Review*. (Reproduced by permission.)

Although many teachers have become aware of the psychological bases of problem behavior, their ways of dealing with such behavior are not as advanced as their understanding of it.

If we intend to understand a problem, we must first of all develop some degree of objectivity. Objectivity does not come easily, especially when the child in question is engaging in a form of hostile or destructive behavior that we find personally obnoxious. Yet anyone who has observed a skilled teacher in action knows that it is possible to deal with hostile or destructive behavior without losing one's sense of objectivity. There is perhaps a natural tendency for us as teachers to be somewhat judgmental, tending to look upon misbehavior in terms of whether it should be punished and how severely it should be punished, rather than in terms of whether it has any serious implications for the child's adjustment or progress as a learner. This tendency of teachers has been the subject of a number of research studies, the first and best known of which was conducted by E. K. Wickman in 1923. When Wickman (1928) asked teachers and psychological workers to rank a list of behavior problems in terms of their seriousness, he found that they tended to come to different and in some instances quite opposite conclusions.

We may derive some encouragement, however, from a more recent study. When Wickman's study was replicated by George A. W. Stouffer, Jr. (1952), thirty years later, he found that teachers and clinicians did not differ as much as they had in 1923. In any event, teachers' attitudes are more professional than those of laymen. Stouffer (1959) also asked a cross-country sampling of 500 parents to rank the behaviors on Wickman's list and found that they tended to have attitudes similar to those of teachers some forty years ago. For purposes of comparison, the twenty most serious symptoms as perceived by parents, teachers, and psychological workers are presented in Table 6-1. The three lists have only six problems in common: unhappy, depressed; cruelty, bullying; stealing; domineering; truancy; and untruthfulness. The teachers' list has twelve problems in common with the mental hygienists' list but has fifteen problems in common with the parents' list. The parents' list has only eight problems in common with the mental hygienists' list. Although teachers share concern with mental hygienists in those problems that may have serious psychological implications, such as unsocial, withdrawing behavior and resentfulness, they also resemble parents in their preoccupation with behavior that challenges their authority and outrages their moral sensitivity. It is difficult to make much progress in understanding students' behavior when we feel defensive, antagonistic, or moralistic.

Our main concern as teachers is, as we have indicated, the promotion of learning. The way in which mental health and progress in learning may interact with each other is shown by a graphic analysis prepared by Loren A. Stringer (1959), who used a variation of the Wetzel Grid [a growth progress chart used by pediatricians and developed by N. C. Wetzel (1942)] to plot a

Educational Psychology in the Classroom

TABLE 6-1. The Twenty Most Serious Behavior Problems of Children, Taken from Wickman's Original List of 50 and Ranked According to Their Seriousness by Mental Hygienists, Teachers, and Parents (Stouffer, 1959)

Mental Hygienists	Teachers	Parents
1. Unsocial, withdrawing	1. Unreliableness	1. Stealing
2. Unhappy, depressed	2. Stealing	2. Untruthfulness
3. Fearfulness	3. Unhappy, depressed	3. Heterosexual activity
4. Suspiciousness	4. Cruelty, bullying	4. Destroying school materials
5. Cruelty, bullying	5. Untruthfulness	5. Cheating
6. Shyness	6. Unsocial, withdrawing	6. Cruelty, bullying
7. Enuresis (bedwetting)	7. Truancy	7. Unreliableness
8. Resentfulness	8. Impertinence, defiance	8. Truancy
9. Stealing	9. Cheating	9. Disobedience
10. Sensitiveness	10. Easily discouraged	10. Impertinence, defiance
11. Dreaminess	11. Resentfulness	11. Obscene notes, talk
12. Nervousness	12. Destroying school materials	12. Impudence
13. Suggestible	13. Suggestible	13. Selfishness
14. Overcritical of others	14. Heterosexual activity	14. Unhappy, depressed
15. Easily discouraged	15. Domineering	15. Masturbation
16. Temper tantrums	16. Temper tantrums	16. Suggestible
17. Domineering	17. Selfishness	17. Domineering
18. Truancy	18. Nervousness	18. Easily discouraged
19. Physical coward	19. Disobedience	19. Profanity
20. Untruthfulness	20. Laziness	20. Lack of interest in work

child's *actual* progress against his *expected* progress—that is, the progress that is typical of the theoretically average child. Figure 6-1 presents the case of a boy who was referred for treatment to the School Mental Health Services of the St. Louis (Missouri) County Health Department. The boy had been doing well in the first grade until his mother died. He continued to make progress, but at a less-than-normal rate. He became greatly overweight, displaying aggressive and disruptive behavior. His 0.2 of a grade advantage at the end of the first grade became a 0.4 lag in the second grade and a 0.8 lag in the third grade. He continued to lose ground until his father remarried. The stepmother turned out to be a woman who was warmly concerned about helping the boy, sought out the boy's mental health counselor, and was able to develop a great deal of understanding of the boy's problem. This enabled her to establish a positive relationship with him, while at the same time she set firm limits to his aggressive and disruptive behavior. Within the next year he gained 2.6 grade levels in school achievement, actually surpassing grade expectancy; this gain was further increased the following year. In the meantime, his obesity and aggressiveness were well under control, and by the end

of the sixth grade he was not only a well-accepted member of his class, but was beginning to play leadership roles to some extent.

Everyday Types of Problems. Many psychologists who work with children classify the behavior problems they encounter into two major categories: *conduct problems* and *personality problems*. Conduct problems consist of behavior

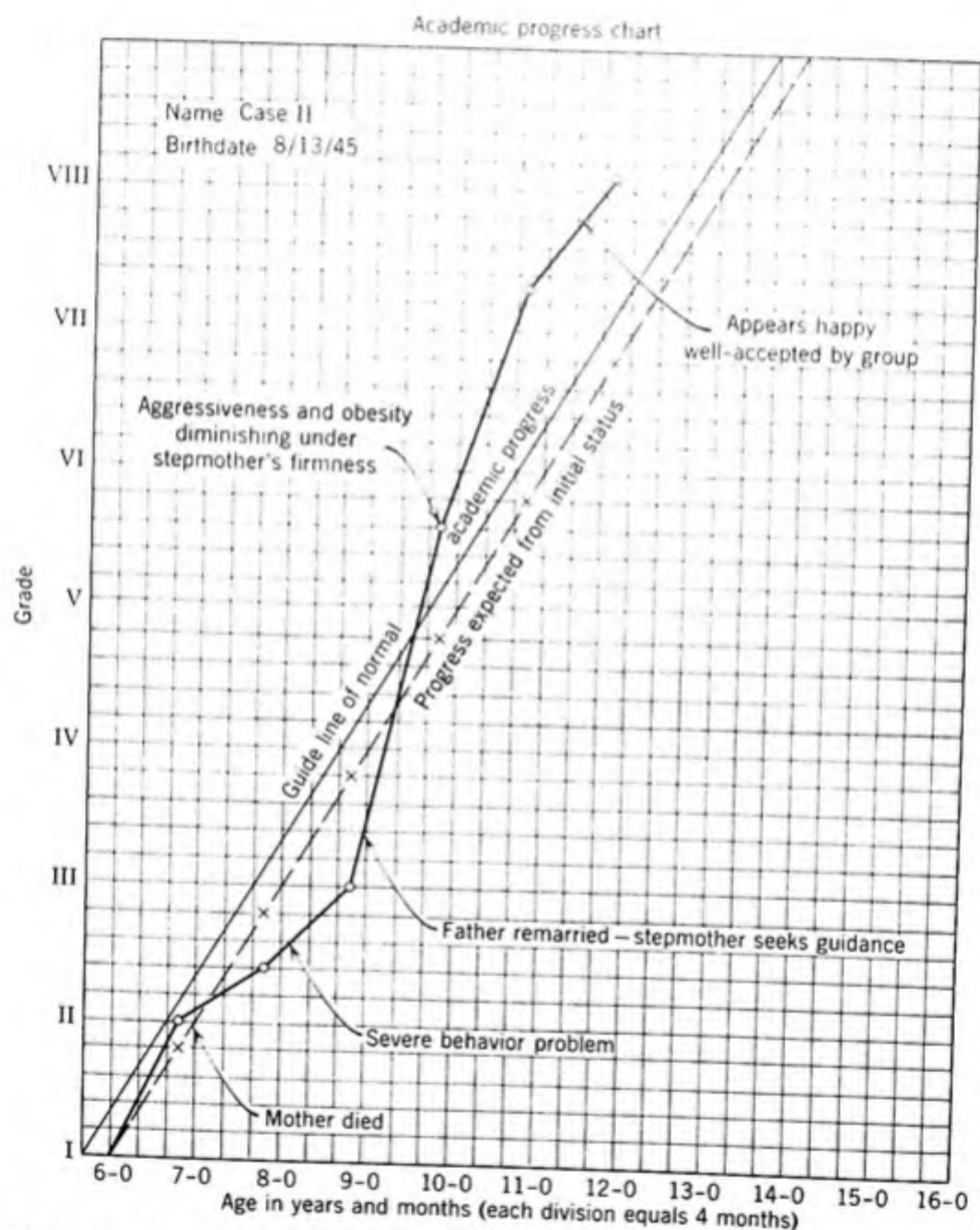


FIGURE 6-1. Academic progress chart of a boy who lost ground under the impact of his mother's death but who made a good recovery through the help of his stepmother and a mental health counselor. (Stringer, 1959.)

Educational Psychology in the Classroom

that is grossly disturbing to others and may in fact be directed against them, in that it is hostile, aggressive, destructive, and/or disobedient. It sometimes involves delinquency and psychopathology. Personality problems are more or less "neurotic" in character and usually take the form of what may be called "withdrawal behavior"—that is, behavior suggesting that the child is fearful of others, feels anxious, and is avoiding situations that might expose him to criticism, ridicule, or rejection. Children troubled by personality problems may also have some degree of hostility but, unless they are placed under an unusual degree of stress, they hold it back or direct it against themselves in the form of guilt or self-criticism and are usually unaware that they are hostile. Both conduct and personality problems may result from attempts to cope with much anxiety, although anxiety is generally more characteristic of children with personality problems. Conduct problems, on the other hand, are more likely to affect the behavior of children who are relatively free of anxiety—that is, who do not have enough "normal anxiety" to feel any concern for the rights and feelings of others or for the consequences and implications of their behavior.

It is obvious that conduct problems are the type that are more likely to come to the attention of teachers. Not all classroom disturbances are caused by children with conduct problems, but these children are likely to cause or contribute to disturbance and to demand their full share (or more than their share) of the teacher's attention. The child with the personality problem, however, is likely to remain in the background and is thus not easily identified as someone needing help. He is usually compliant and obedient and consequently may escape notice altogether.

Herbert C. Quay and Lorene C. Quay (1965) have identified a third dimension of problem behavior that appears in early adolescence: immaturity. Table 6-2 lists the kinds of symptoms that were found to be associated with the three categories of behavior with seventh- and eighth-grade children. Note that there seems to be an overlap between the three types: all three are, for example, characterized by distractibility, and students labeled as "psychopathic" (having conduct problems) and "immature" are both characterized as restless, hyperactive, and having a short attention span. There are two points here: one, that each list of symptoms must be considered as a whole in order to get the "flavor" of the kind of behavior problem it describes, and, two, making a decision as to whether a student belongs to one category or another has its pitfalls, even for an expert, because certain symptoms apply to more than one category.

Although anxiety is more obviously a factor in the kinds of behavior included under the heading of "neurotic or personality problems," the pres-

TABLE 6-2. Symptoms Characterizing Three Major Kinds of Behavior Problems in Early Adolescent Children (Quay and Quay, 1965)

Personality Problems (Neurotic)	Conduct Problems (Psychopathic)	Problems of Emotional and Social Immaturity
Unable to have fun	Restless	Restless
Self-conscious	Attention-seeking	Self-conscious
Feelings of inferiority	Disruptive	Feelings of inferiority
Preoccupied	Boisterous	Preoccupied
Shy	Short attention span	Short attention span
Withdrawal	Inattentive	Lacks confidence
Lacks confidence	Lack of interest	Easily flustered
Easily flustered	Laziness in school	Daydreams
Lacks interest	Irresponsible	Passive, suggestible
Irresponsible	Disobedient	Hyperactive
Daydreams	Uncooperative	Distractible
Aloof	Passive, suggestible	Impertinent
Distractible	Hyperactive	Nervous, jittery
Lethargy	Distractible	
Nervous, jittery	Impertinent	

ence or relative absence of anxiety is not of particular value in determining whether a child needs psychological help. John F. Feldhusen and John R. Thurston (1964) of Wisconsin State College in Eau Claire used a questionnaire designed to measure anxiety (the Children's Manifest Anxiety Scale) to identify the 32 most anxious and the 32 least anxious children out of a group of 120 children selected from 29 fifth-grade classrooms in Milwaukee. Each child was examined by a panel of psychologists, who then rated him on his need for psychotherapy, as well as on other variables. Children were rated on a three-point scale: 0, not in need of therapy; 1, in need of therapy for a problem or a difficult home situation; and 2, in need of intensive psychotherapy. "High-anxious" children received a mean (average) rating of 0.56, which was slightly but not significantly higher than the mean rating of 0.34 for the "low-anxious" children. Hence children with low levels of anxiety were almost as likely to have problems calling for psychotherapy as were children with high levels of anxiety.

Prevalence of Problem Behavior. There have been a number of studies that have attempted to assess the prevalence of problem behavior in the schools. Harlan H. Lewis (1951) conducted a survey of 20,000 elementary school children and reported that 4 per cent displayed problems of emotional or social adjustment serious enough to warrant some concern on the part of teachers. This would average out to one or two children per classroom.

Educational Psychology in the Classroom

Another study by Norah Clancy and Faith Smitter (1953) reported that 11 per cent of the elementary children in Santa Barbara County, California, could be classified as emotionally disturbed, with percentages in individual schools running as low as 5 per cent and as high as 35 per cent. The difference in the figures reported by Lewis and by Clancy and Smitter is accounted for partly by differences in standards used by the researchers in classifying maladjustment. Lewis was concerned with children who needed to be referred to clinical personnel, and Clancy and Smitter were interested in identifying children who needed special attention from teachers.

Still another analysis of school mental health problems is that conducted by Ivan N. Mensh and his co-workers (1959) at the St. Louis (Missouri) County Health Department. The researchers worked closely with teachers in rating the mental health of 827 third-grade children according to a scale developed by Charles A. Ullman (1952). The system of classification they used, together with the percentage of children in each category, is as follows:

1. *Well adjusted*: a child who is well adjusted in his relationships with others and in his accomplishments (20 per cent).
2. *No significant problems*: a happy child who gets along well and has accomplishments more or less consistent with his age and level of development (52 per cent).
3. *Subclinically disturbed*: a child who is not as happy as he might be, who encounters some difficulties in adjustment, and has some problems in growing up (20 per cent).
4. *Disturbed*: a child who has or is likely to have serious problems of adjustment and who should be referred for clinical help (8 per cent).

No Child Is Entirely Free from Emotional Problems. The analysis conducted by Mensch and his colleagues shows how it is possible to think of mental health on a kind of continuum, ranging from a condition that might be described as "fully functioning and effective" to one that might be described as "functioning inadequately, is ineffective, and needs help badly." Such an approach to mental health is different from the older idea of regarding most children as "normal" and the "problem child" as "abnormal." The older philosophy led us to focus our attention on the "problem child" and to try to help him become normal like other children. It is easy to understand the attractiveness of the older approach, because it is the "problem child" who is giving us all this trouble; hence *he* is the one who needs help.

One of the difficulties with the older approach is, as we have indicated, the fact that there are no sharply defined divisions between "normal" and "problem" children. Furthermore, focusing on the needs of "problem chil-

dren" as such may lead us to overlook what may be serious problems among "normal children." As the studies conducted by Wickman (1958) and Stouffer (1952, 1959) have shown, difficulties that are often overlooked by parents and teachers may actually be indicators of more serious maladjustment, whereas behavior that parents and teachers consider alarming may not have any serious implications as far as the adjustment and mental health of the child are concerned. In the study by Mensh and his associates, referred to above, the parents of the 827 third-grade children were asked to list the problems they had with their children. The researchers then analyzed the problems to see which of them tended to be associated with emotional maladjustment as rated by their four-step scale. The behavior problems reported by the mothers are listed in Table 6-3 according to the frequency reported. Only half the behaviors on the list (the ones with asterisks) showed any significant association with emotional maladjustment as reported by teachers and mental health workers.

Attempts to classify children into two groups—"normal" and "problem"

TABLE 6-3. Percentages of 827 Mothers Reporting Various Kinds of Problem Behavior in Their Third-Grade Children (Mensh et al., 1959)

Problem	Percentage of Mothers Reporting Problem
Nervousness *	33
Eating problems	29
Daydreaming *	21
Temper tantrums	19
Unusual fears	18
Difficulties in relations with other children *	16
Withdrawn behavior *	7
Aggressive behavior *	9
Wets self	14
Overactive *	14
Lying	13
Crying	13
Speech disturbance *	9
Thumb-sucking	9
Stomach upset	8
Difficulties in relations with adults	7
Withdrawn behavior	1
Aggressive behavior	6
Destructiveness *	7
Trouble with school	4
Sexual difficulty	2
Stealing	2

* Children for whom this problem was reported by mothers also tended to be identified by teachers and mental health workers as emotionally disturbed or maladjusted.

Educational Psychology in the Classroom

children"—are further complicated by the fact that everyone, children and adults alike, is troubled by one or more emotional problems. A study by Jean Walker Macfarlane (1943), for instance, shows that a preschool child typically displays from four to six different problems. The following problems were reported for a sample of 252 five-year-old children: lying, 25 per cent; thumb-sucking, 18 per cent; fears, 46 per cent; temper tantrums, 46 per cent; jealousy, 42 per cent; speech problems, 22 per cent.

If a "problem child" is a "child with a problem," then all children would be classified as "problem children," inasmuch as each one has some problem or other. However, some individuals have more problems or more symptoms than others, and they are the ones who usually cause greater difficulties for themselves and for others. Emotional adjustment, like all other human characteristics, is not only a matter of degree, but it also varies from one situation to another. A high school junior may get good grades and have many friends but may develop a bad case of "test nerves" every time he has to take an examination or quiz. A girl may be reasonably happy and well adjusted but may bite her fingernails down to the quick. Or a fourth-grader may be a model student but is also inclined to bully smaller children.



Chaim Lieberman

Many teachers equate problem behavior with hostile, aggressive, disruptive activity, such as fighting. But not all problem behavior is hostile, aggressive, or disruptive.

Lois B. Murphy (1956) studied a number of normal children who attended the nursery school at Sarah Lawrence College. These children were well cared for, with parents who were deeply concerned about their welfare. The children have since grown up and still appear normal. She writes:

We can now say of these children who have all developed extremely well, *no child was completely free of conflicts or developmental problems*. Among these normal children, five to our knowledge required special help from parents or others at some point where they were bogged down. This help included changing from a school where the child was unhappy to a school where the child was better able to take hold; in one instance, special help from teachers; in another instance, suggestions from a psychiatrist who was a friend of the family; and in one instance, therapy.

Dealing with Problem Behavior. From time immemorial, teachers have tried to deal with problem behavior by direct and sometimes drastic methods: physical punishment, banishment from the classroom, sarcasm, scolding, detention, and the like. Sometimes such methods help a child who is wavering between conformity and antisocial behavior and who needs reassurance that the teacher means what he says, but for the most part, the results of such direct handling are disappointing. Very often, punishment worsens the problem behavior instead of eliminating it. Direct treatment of problem behavior seldom gets at its source; it is seldom based on any genuine attempt to understand the motivation and behavior of children. Furthermore, it usually increases the fear that children have of adults and, with preadolescents and adolescents, may aggravate the aggressive, rebellious behavior that is so common during these stages of development.

Once school people have grasped the idea that it is necessary to go beyond the surface aspects of problem behavior in order to deal with it properly, they will be in a position to develop new and more effective methods of dealing with it. One such experimental approach has been described by A. D. Buchmueller and others (1949, 1954), who conducted psychotherapy with a group of parents of behavior problem children in St. Louis. The close relationship between family problems and problem behavior is indicated by the fact that the classroom behavior improved for 80 per cent of the children whose parents participated in the project, whereas it remained unimproved for 80 per cent of the children whose parents refused treatment.

Unfortunately, understanding problem behavior is a difficult task. The symptom itself tells us very little about the motivation of the child. "Why does a boy steal money from other children?" a teacher asks. The fact that he steals tells us very little. He may steal for any of an infinite number of reasons. About the only thing we can determine is that he is probably express-

ing some hostility, because stealing is an act "against" others. Nor do the boy's answers to our questions help us very much. Persons who display problem behavior cannot actually say why they do it. True, they can give some reasons that may sound very logical, but further psychological investigation almost invariably discloses reasons that are quite different, reasons that the individual himself either does not know or is unable to express.

EMOTIONAL PROBLEMS OF EVERYDAY LIVING

Anxiety as a Basis for Problem Behavior. According to the developmental scheme of behavior that we presented in Chapter 2, human behavior may be viewed in terms of attempts to meet basic needs or to cope with real or anticipated frustrations of these basic needs. When we feel apprehensive (perceive threat) about our ability to maintain satisfactory relations with others (n Aff), the feeling that ordinarily results is anxiety. Anxiety may appear in other contexts, of course, but our relations with others is perhaps the commonest source. One group of researchers found that elementary school children who were least chosen by others on a sociometric test scored high on the Children's Manifest Anxiety Scale (had high anxiety), whereas the more popular ones scored low (McCandless, Castenada, and Palermo, 1956). In another study, the Children's Manifest Anxiety Scale, or CMAS, as it is commonly called, was used with nine-year-olds in the Rochester, New York, city schools to examine the relationship between anxiety and various sociometric, cognitive, and physical health variables. Figure 6-2 shows that the more anxious child was more likely to be referred to the school nurse's office, to be rated by his teacher as having negative behavior characteristics, and to be nominated by his classmates for a negative role in a mythical "class play." On the other hand, the less anxious child not only was more likely not to receive these negative evaluations, but was also more likely to get better grades, to have a high verbal IQ, and to score higher in reading comprehension (Cowen et al., 1965).

Anxiety is a form of tension. When things are dull, we may risk a little anxiety in order to liven things up, but once we get involved in a tense social situation, we may have more anxiety than we can handle for the moment and may make use of some more or less immature ways of coping with it without realizing that we are doing so.

Velma Lux is a rather plump, pleasant girl of fifteen. She is quite popular with her classmates and is always at the center of things. Hence no one was surprised when she was nominated for student-body vice president. The campaign lasted a week. It was a gala affair with posters, banners, and rallies. Velma found

Emotional Health and Problem Behavior

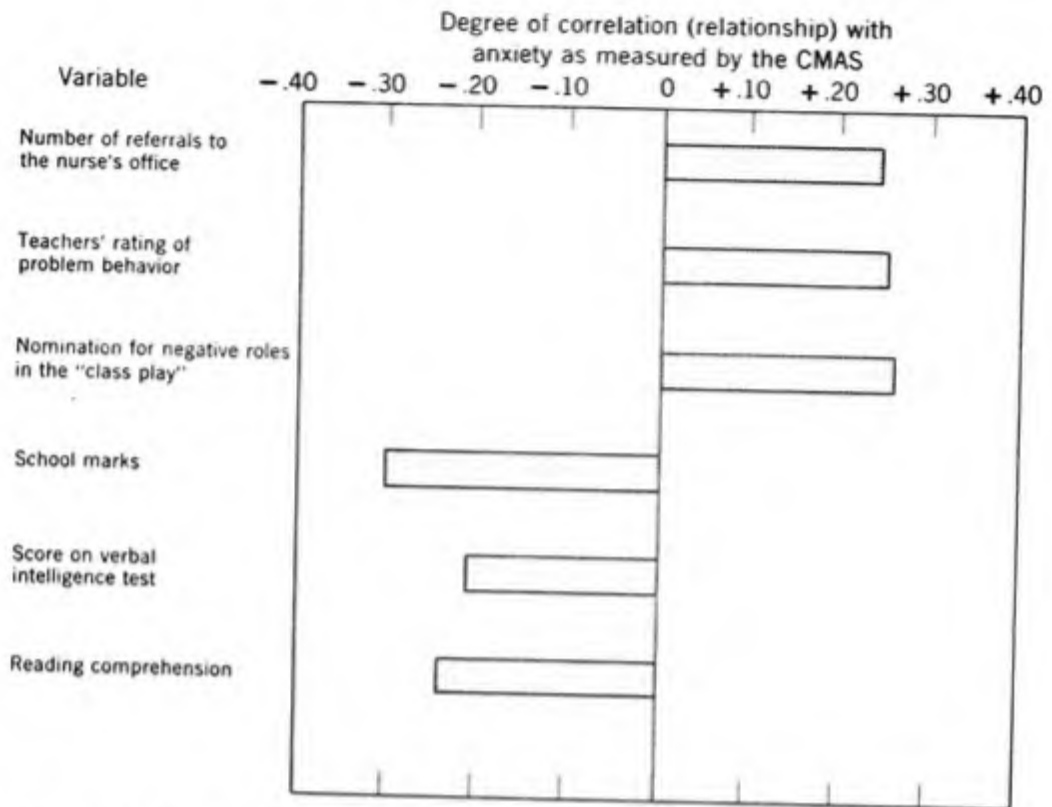


FIGURE 6-2. Coefficients of correlation (degrees of relationship) between the anxiety of nine-year-olds, as measured by the Children's Manifest Anxiety Scale (CMAS), and various indications of adjustment. (Cowen et al., 1965.)

it quite exciting. She neglected her school work and spent her afternoons and evenings with her friends at Don's Hamburger Heaven, a place frequented by "the crowd." When all the votes were counted on the afternoon of election day, Velma was pleased to find that she had won by a comfortable margin. However, when she went home that night, she found that two English papers were overdue, she had missed turning in her French assignments for the whole week, and she had gained seven pounds!

Running for political office arouses anxiety. We wonder how we stand with the voters: will they accept us or reject us? Velma's way of handling or avoiding anxiety is to talk with her friends at Hamburger Heaven and to consume hamburgers. Although there is no *logical* relationship between the needs for status and acceptance and eating hamburgers, there is for Velma an emotional or psychological relationship. Velma kept telling her friends that she did not care whether she won or not, but her behavior during the week tells us a different story. She says that she worried "a little" about her homework and wondered once or twice why her dresses were getting tight. Hence she really had no great amount of insight into the causes of her anxiety.

Educational Psychology in the Classroom

Of course, there is nothing unusual or pathological about Velma's behavior. It is the kind of thing that could happen to almost anyone. Our purpose in discussing it here is to show how the real significance of our behavior is hidden from us, and how we often do seemingly irrational things as a way of avoiding anxiety.

Mental Mechanisms. Psychologists have given much attention to analyzing and classifying the various kinds of maneuvers that we use to avoid or reduce anxiety or tension. These habits and other forms of behavior are commonly called "mental mechanisms," "escape mechanisms," or "defense mechanisms," not only because they have some "mental" basis, but also because they enable us to escape from or defend ourselves against some tension-producing situation. Mechanisms of this sort range from perfectly normal-average gestures like drumming on the table with one's fingers, chewing gum, cracking knuckles, or calling up a friend for a chat, to more pathological ones like the inability to complete assignments or turn them in on time, extreme suspiciousness, tendencies to distort meanings, and complete social withdrawal. Most of the mental mechanisms that we resort to in everyday life lie at the normal-average end of the continuum, but because they play such an important part in problem behavior, we shall review some of the commoner types.

Rationalization. This type of defense mechanism is very familiar because we use it so commonly. Rationalizing consists of giving explanations for our behavior, explanations which often seem quite logical but which do not get at the real cause. For example, we might ask Velma why she ate so many hamburgers during the campaign, and she might say that she was hungry. Or we might ask her why she spent so much time with her friends during that week, instead of studying, and she might reply that she wanted company. Or that she simply forgot about her assignments. All these explanations have a certain logical ring to them, but they evade the real issues. It is important to note that Velma *believes* these explanations. We might point out to her that being hungry is no real explanation of her behavior—why was she hungrier than usual this week? If Velma has any deep anxieties, she might even become angry at our questioning and accuse us of "picking" on her. No one likes to have his rationalizations dissected and analyzed and revealed as illogical. After all, their purpose is to *protect* us from our own anxiety; we are afraid that if the rationalization is taken away, we will have to face the anxiety.

Displaced Hostility. Velma's chief opponent for vice president was Delores Burkhardt. Delores had been quite confident about winning and, when she lost, it came as quite a blow to her. She took it very well at first. She congratulated Velma and insisted on buying a hamburger for her. However, when

she arrived home, she got into a violent argument with her parents when they refused to buy her a cashmere sweater. Later in the evening, the boy with whom she had been going steady for four months called up and suggested that they go to the election dance together. It was a very informal affair, thought up by the elections committee at the last minute. Delores asked him whether he was deliberately trying to humiliate her, now that she had lost the election. One word led to another, both became angry—and that was the end of *that* friendship.

What Delores is doing, in a symbolic and not very subtle way, is taking out her anger, irritation, and disappointment on those around her. Perhaps she should really be angry with herself for not having been very realistic about the election. But Delores, like so many of us, is inclined to place the blame for her discomfiture anywhere except where it belongs. To take a good look at oneself and ask, "Where was I at fault?" arouses much anxiety. We do not like to take stock of ourselves because we are afraid of what we might find.

Self-Punishment. Some people, of course, go to great lengths in blaming themselves when things go wrong. This is particularly common with individuals who grow up in families that are very strict, set excessively high standards of behavior, and are very critical. Such people find themselves unable to blame or criticize others, even when others actually are at fault. This is just as unrealistic as blaming others whenever things go wrong. What usually lies back of such behavior is the fear that "others won't like me if I criticize them." Such people often have an overpowering need to be liked and accepted. We all have needs to be accepted and liked but we are being unrealistic and somewhat neurotic if such needs dominate our lives. What usually happens is that the self-punisher actually jeopardizes his chances for being accepted, inasmuch as his continual self-abasement and self-criticism make others feel uncomfortable.

Repression. One of the characteristics of behavior mechanisms is that their true causes are concealed from the individual. The very anxiety that they arouse somehow distracts his attention from them and places them beyond the limits of awareness. Repression also helps us forget details in our lives that are painful. Sometimes this has an overall healthy effect, such as the forgetting of a humiliating and painful experience, but sometimes it causes us to forget something we should have remembered—like an appointment with the principal. There is every reason why we should have remembered an appointment with such an important person, but it really slipped our minds. Perhaps we were out shopping and got so involved in what we were doing that when we looked at our watch it was well past the appointed time.

Educational Psychology in the Classroom

We feel terrible, of course, and cannot figure out why we should have done such a thing.

Probably most of us have some anxieties about meeting and talking to persons in authority, and occasionally this anxiety is enough to cause us to forget important engagements. It usually works the other way around, however. The anxiety that we would feel if we did *not* keep our appointment with the principal is greater than the anxiety we feel in keeping it.

Conformity. One of the commonest ways of avoiding anxiety is to conform to the expectations that others have for us. Because the principal expects us to be on time for the appointment, we may even arrive ten minutes or so ahead of time. Thinking and behaving differently from those around us (acting contrary to the norm) usually arouses anxiety, because it brings up the possibility that others will reject us for being different. Hence we feel that it is much safer to conform, even when it may be in our best interests to do otherwise.

Conformity usually occurs as the result of "identification"—that is, we pattern our behavior according to some person or group that we identify as the person or persons we would like to resemble. Thus a six-year-old boy might identify himself with his father part of the time and with his favorite cowboy star at other times. Sometimes he will use his father's mannerisms and will take pride and pleasure in wearing one of his father's old hats, but at other times he may be happier in a cowboy hat. Or a teenage girl may pattern her walk, speech, and mannerisms after those of her favorite movie star. When President Eisenhower rode to his inauguration wearing a Homburg hat, a great many men began wearing Homburgs, too.

Identification and conformity are important aspects of the learning process. Children learn from their parents and teachers by identifying with them. By imitating adult behavior children work out patterns of conformity that enable them to get along with adults and help them to grow up to be like them. Unfortunately, identification is not a very selective process, for children are just as likely to copy the faults as well as the virtues. As someone has so aptly put it: "The trouble with the younger generation is that they are growing up to be no better than their parents."

Projection. Whereas identification and conformity are ways of avoiding anxiety by seeing the qualities of others in ourselves, projection is a mechanism that causes us to see our own qualities in others. The person who projects explains the behavior of others in terms of his own motivation. For example, a college student who continually interrupted others got a rather low mark in a course taught mainly by the discussion method. He explained the low grade by saying that he never got a chance to finish what he said, because

people were always interrupting him. More often the basis for projection is much less obvious.

A group of four boys did not want Fritz Mahoney to join their basketball team because, they said, he was a show-off. Mr. Kahn, their adviser, was surprised at this because the boy in question was rather quiet and shy. Indeed, Fritz was an excellent basketball player, much better than the four. Furthermore he was at the top of the honor roll in school. None of the four boys was inclined to be much of a show-off, but it was evident that they were jealous of the fifth boy. Mr. Kahn concluded that *they* would like to "show off," except that they had nothing to show.

Doris kept getting low marks on her report card, and said that the teacher did not like her. When her mother visited the teacher, Miss Ogilvie, she found her a somewhat cool, detached person, but someone who had a genuine interest in children and teaching. It was hard for her to see how Doris could feel that Miss Ogilvie did not like her. Actually, Miss Ogilvie had gone out of her way to help Doris because she realized the girl was having difficulties.

Shyness. The inability to speak out in a group, to recite, or to perform before an audience is one of the commonest forms of avoidance behavior, although not a mental mechanism in the strict sense of the word. However, by begging off or refusing to speak, the shy student avoids exposure to value judgments on the part of others, an experience that would, in his opinion, be too painful to bear. The shy person often excuses his nonperformance by pleading inadequacy—"I really have nothing important to say," "Others can do it so much better," and the like. He may indeed feel inadequate at the time, although afterwards he often feels as though he had let himself down, and had also let down those, like his teachers and his family, who would like to see him succeed. Then his guilt feelings may become as painful as his anxiety.

Some research by Allan Paivio (1964) suggests that there is a relationship between parental patterns of reward and punishment and audience sensitivity or shyness. Paivio collected compositions written by third- and fourth-grade children in Montreal schools on either one of these two topics: "Why I like to recite in class" or "Why I do not like to recite." A choice of the second topic was taken as an indicator of shyness. The parents of each child were then asked how they dealt with his social behavior and his achievements. Did they reward him for his achievements? Did they punish him for nonachievement? Or did they do both? The results, as indicated in Table 6-4, show that the shyest boys were those who were not rewarded for achievements but punished for nonachievement. The opposite result was obtained for girls. Results also show that boys this age are shyer than girls. Another incidental

Educational Psychology in the Classroom

TABLE 6-4. The Relationship between Audience Sensitivity (Shyness) of Third- and Fourth-Grade Children and the Kind of Treatment They Received from Their Parents for Achievement in Social Situations (Paivio, 1964)

Parents' Treatment of Child for Achievement or Nonachievement	Number of Compositions Written on Liking or Disliking Recitation			
	Boys		Girls	
	Like	Dislike	Like	Dislike
High reward, low punishment	13	1	9	5
Low reward, high punishment	1	13	10	6
High reward, high punishment	8	6	7	6
Low reward, low punishment	12	8	13	6

finding was that when parents were active socially and made frequent appearances before audiences, their children tended to be less shy.

Daydreaming and Fantasy. One very common way of avoiding anxiety is to escape into the world of fantasy. Everyone does some daydreaming: it is a way of avoiding the uncomfortable realities of life by creating a temporary world in which all goes well. As with other mental mechanisms, the emotional health of the individual is revealed by the extent to which he employs the mechanism. A child who continually daydreams, who is always off in a dreamworld, probably needs special care and attention. On the other hand, the child who daydreams when he is bored or at odd moments is merely doing what most children do.

Younger children act out their fantasies, often insisting that fantasy is reality. For example, a child may pretend that he has an imaginary playmate who gets him into trouble, but who must be treated like one of the family. Perhaps a place must be set for him at the table, or an extra pillow placed in the bed for him. Parents are sometimes disturbed by the seriousness with which children take such fantasies, but they are not unusual during preschool and primary years.

Regression. It is very common for us to revert to behavior that is childish or less mature under stress of anxiety. It is as though we were so upset and distracted that we could not cope with events in our usual way but had to fall back on earlier patterns of behavior. Thus the adult under stress stammers, is shy, and behaves as he did when he was an adolescent; the adolescent shouts and carries on like a ten-year-old; the ten-year-old has a temper tantrum like a preschooler; and the preschooler wets his pants.

Roger G. Barker, Tamara Dembo, and Kurt Lewin (1943) permitted some five-and-one-half-year-old children to play with some interesting toys. They

then took the toys away and placed them behind a barrier where they could easily be seen but could not be touched. The children were then given other, less interesting toys to play with. The children had been engaging in play typical of their age level but now they engaged in play patterns that were, on the average, more typical of children three-and-one-half-years-old. [See discussion of the study of children's play by Parten (1932) on pp. 131-132.]

Compulsiveness. One of the chief characteristics of mental mechanisms is the tendency of the individual to behave as though he had no choice in the



Berni Schoenfield

Fantasy offers one way to work off tension, anxiety, or hostility. Children at play often pretend that they are adults in positions of authority, sometimes "overplaying" their roles with great gusto and relish. Such role playing, however, may help them to accept adult directions and control more readily.

Educational Psychology in the Classroom

matter—it is almost as though he were *compelled* to rationalize, daydream, or regress. Often he “knows better,” but seems to be unable to stop himself. The habitual smoker seems to have no control over his smoking—he just *has* to have a cigarette. Sometimes the compulsive need to reduce or avoid anxiety and tension appears to dominate a person’s life—things have to be *just so*; there are little rituals that *have* to be followed and that become *very* important. The teacher who is excessively neat, who never has a hair out of place, who refuses to accept a composition with an erasure or a correction is what we call a habitually compulsive person. Most people do not fall into such an extreme category of compulsiveness, but most of us engage in some kinds of compulsive behavior: knee jiggling, doodling, nail biting, and ear pulling are common examples.

Learning Mental Mechanisms. The chief function of mental mechanisms is that of helping us keep anxiety or tension to levels which are not painful for us. Mechanisms do not solve the problems that created the anxiety in the first place; their purpose is primarily that of enabling us to feel better, if only for the moment.

It is important to note that mental mechanisms, like most complex forms of behavior, are *learned*. Just as we learn when and where to be anxious, and what to be anxious about, so do we learn the behavioral tricks to use to keep anxiety within reasonable bounds. Knowing that mechanisms are learned is reassuring, in that we can assume that we can learn other ways of coping with anxiety. The student who reacts to an audience situation with withdrawal can learn to face it more confidently. A student who regresses to a more childish pattern of behavior under stress can learn to deal with stress-producing situations in a more mature manner. This unlearning and relearning usually takes place gradually, over an extended period of time. Furthermore, as students develop and become more mature, they generally learn some of the more effective ways of coping with anxiety and drop some of the less effective ways.

Understanding mental mechanisms helps us identify some of the problems that commonly occur in everyday behavior, but there are other important aspects that deserve our attention. Why is George’s anxiety more acute on some days than on others? Why does Jill show a great deal more anxiety than her brothers and sisters? In other words, what lies behind the anxiety that produces the behavior mechanism?

Conflict as a Basis for Problem Behavior. Very often what lies behind the anxiety is not just a simple frustration of basic needs—indeed, human problems are seldom simple but are infinitely complex and intricate. Usually there is some psychological conflict in the background. Fred’s anxiety stems largely

from the fact that he would like to be with other boys his age and enjoy their company. But his mother makes it plain to him that she feels he ought to spend more time at home, because she "needs to have him around." On the one hand, he loves his mother and wants to please her but, on the other hand, he does not want to jeopardize his relationships with his friends. No matter what he does, he is bound to cut himself off from somebody. Most of the time this quandary is in the background, but every so often something happens that brings it to the point of crisis, and then Fred's anxiety is acute. How he will handle his anxiety depends on many things, not the least of which is his habitual way of expressing himself. If he expresses his feelings easily, freely, and aggressively, he may take out his anxiety in the form of hostility—through displacement, projection, exhibitionism, chronic irritability, and the like. If he tends to withdraw and to suppress or repress his feelings, he may become moody or compulsive, or may bury himself in books.

One common conflict occurs when parental or family standards are at variance with the standards of the school. In Chapter 4 we described how personality and patterns of behavior are influenced by the attitudes and expectations of parents. It very often happens that children who come from homes where the cultural pattern is quite different from that of the teacher or the other students will have great difficulty in adjusting to the expectations and standards of the school.

It is commonly observed that there is a close relationship between the number of books in the home and the success of children at school. This does not mean that parents can boost their children's marks by filling their homes with books, but rather it is a reflection of the fact that families who have many books appreciate the ideas that come from books. Books are very much a part of their lives. People who own many books are, in general, people who believe in getting an education, developing responsibility, planning for the future, organizing one's work, and in similar middle-class values. These are also the values that help children make progress in school. People who have no books tend to live more for the immediate present, rather than the future. Their world is the world of things and of feelings, rather than of books and ideas. Therefore they see little value in carefully laid, long-range plans, developing responsibility for group goals, and organizing one's life so as to maximize future success. Their life values favor direct and immediate action, free expression of emotion, and impulsiveness. Thus their children often display behavior that is in direct conflict with the kind of "life style" that is favored by school personnel. What we often do not recognize is that if we succeed in getting children from lower-class surroundings to accept middle-class values and to conform to middle-class norms, we are helping

them to erect a barrier between them and their families. Many children learn through their experiences at school to prefer a middle-class way of life, but they are understandably cautious about isolating themselves from their families. This is not to say that we should not teach middle-class values, but it does emphasize some of the problems we create for children thereby. The conflict between the middle-class values of the school and the lower-class values of the home is a common source of anxiety.

Behavior Problems and Social-Class Background. Many instances of problem behavior that come to the attention of school authorities are acts that appear to be condoned by people living in lower-class surroundings. Examples of such behavior are arguments accompanied by screaming and cursing, fighting with clubs and knives, destruction of property, and sexual aggression. Actually, it is not fair to say that such behavior is condoned, because children in lower-class surroundings are usually punished severely for these and other misdemeanors. On the other hand, however, when they see adults and sometimes even their own parents doing such things, they decide, perhaps somewhat cynically, that the punishment only means that behavior of this kind is reserved for adults, and that it is all right unless you happen to get caught.

A number of studies indicate that the behavior displayed by children from lower-class homes is related to the way in which they are treated at home. When H. S. Maas (1951) contrasted the behavior of lower-class and middle-class children, he found that lower-class children showed more tendencies toward *both* submissive behavior and bullying. Submissiveness and bullying are forms of authoritarian behavior—the kind of behavior that occurs when stronger individuals habitually take advantage of weaker ones. The behavior expressed by these children, in turn, reflected the relationships between the children and their parents. Lower-class children also reported more feelings of rejection and unworthiness as a result of family relations than did middle-class children. Lee Burchinal and others (1958) found that the fifth-grade children of fathers employed in professions and business fields were better adjusted than were children of fathers who were skilled or semiskilled employees. The latter children, in turn, had better adjustment than did children whose fathers were in unskilled work.

Some researchers feel that the higher level of emotional disturbance found in lower-class children is due to lack of personal attention at home. Lower-class families are generally larger than middle-class families, and consequently parents are unable to devote much individualized attention to each child. Mary F. Waldrop and Richard Q. Bell (1964) observed the extent to which nursery school children tried to approach and make contact with their teacher and found that those children who were most persistent and most dependent

tended to come from "high-density" families—families in which there were many children and a relatively low number of months between births. In such families, they pointed out, children would be more likely to feel deprived of their mother's love and attention and would be more likely to feel anxious. Their attempts to contact the nursery school teacher appeared to result from their anxiety and their need to satisfy their unmet needs for attention.

Social-class differences are also related to differences in values. When fifth-grade children of low and high socioeconomic status were asked what they would do about a fight between two brothers, children from lower-class homes indicated that they would punish and avenge misbehavior, whereas children of higher socioeconomic status were inclined to try to solve the problem in ways that were friendly, positive, and constructive (Dolger and Ginandes, 1946). Some clues as to these differences were found in a study by J. P. Anderson (1940), who asked junior high school pupils to fill out questionnaires dealing with parental attitudes. The children who reported that their parents did a great deal of criticizing, nagging, punishing, and close supervising, were also the children whom classmates identified as quarrelsome, disobedient, and quick-tempered. It seems reasonable, in the light of other studies of child-parent relations, that the behavior observed in these children was to some degree the result of the treatment they received from their parents.

The problem behavior teachers will encounter in dealing with children from lower-class surroundings will vary with the community, the behavioral standards set by the parents themselves, and the attitudes of the school and the community toward the families. However, the basic points of conflict that are potential sources of problem behavior with children from lower-class homes are the differences in behavior standards at home and at school, the hostility and suspicion that lower-class parents have for the school and the school has for the parents, and the inability or unwillingness of many schools to understand the needs of lower-class children and to make adjustments in curriculum and teaching methods in order to meet these needs.

It should not be assumed, however, that middle- and upper-class homes do not produce behavior problems in children. Jean A. Thompson (1948) studied the background and incidence of "school phobia," a disturbance characterized in its earlier stages by habitual tardiness and in its later stages by chronic absence or extreme panic, often accompanied by nausea, vomiting, crying, or dizziness. She found that most cases came from middle-class areas of the city, whereas slum areas, such as Harlem, had low rates. Most of the children had average IQs or better, but were retarded in school achievement. The most constant factor was the personality of the parents. Mothers were overanxious, oversolicitous, domineering, immature, self-centered women;

fathers were gentle, kindly men, dominated by their wives. Evidently, the phobia was to a large extent the result of the mothers' inability to relax their hold on the children and their jealousy or fear of the school's ability to attract the loyalty and attention of their children. The most effective treatment for school phobia involves a prompt return of the child to school, which not only restores the child to a growth-promoting environment, but also removes him from his involvement in a cycle of mutually reinforced and reinforcing anxieties in the home (Rodriguez, Rodriguez, and Eisenberg, 1959).

There is a possibility that children from upper-middle-class and upper-class homes may present more than their share of problem behavior. The study by Burchinal (1958) and others, cited above, found that children of parents who had postgraduate college degrees also tended to have more problems of adjustment than did other middle-class children. The study by Mensh and others, also cited earlier, provides additional bases for believing that upper-class children have more than their share of problems. As Figure 6-2 shows, the percentage of upper-class children showing emotional disturbances was higher than that for middle-class or lower-class children. Further examination of the data provided by Mensh and his group (1959) indicates that the areas of greatest difficulty for upper-class children, according to their mothers' reports, were: difficulties in relations with other children (both withdrawn and aggressive behavior), destructiveness, daydreaming, nervousness, and speech disturbance.

Adolescent Rebelliousness. Another source of behavior problems is the conflict between adult values and those of youth—preadolescents, as well as adolescents. The relationship between adults and youth is often marked by hostility, irritation, and frustration. Youth demands the right to do what adults do, but adults think they are not yet ready. Adults want youth to be more responsible and to think things out for themselves, but youth complains that adults do not give them the freedom to develop this responsibility and self direction. On the one hand, young people expect help in working out their problems, but on the other hand, they resent suggestions and advice.

The behavior of youth varies greatly; we cannot even depend on their rebelliousness. Some experts even doubt whether they are rebellious, pointing to surveys showing that a large proportion—perhaps even a majority—of teenagers prefer their parents' goodwill and values to those of their friends. The rebelliousness that appears in early adolescent years certainly tends to diminish as young people approach adulthood and begin to express and share in the values of adult society (Bealer, Willis, and Maida, 1964). But teenagers often feel unsure of themselves as they try to become integrated into the

adult world. This uneasiness underlies their tendency to be overquick at times in rejecting teachers, parents, or any adult who tries to assert his authority over them. At other times, they overaccept any adult who appears in any way friendly or agreeable. Out of these conflicting feelings of wanting both to be independent and adultlike and to be dependent and follow the lead of adults comes much anxiety and some problem behavior.

Some youths make a show of rejecting the middle-class insistence on order, regularity, and responsibility. Some reject it in a noisy, hostile, aggressive way and join booted and leather-jacketed motorcycle clubs in search of freedom. Others seek freedom in the shaggy beard, sandals, and dirty jeans of the "beatnik." The percentages that make use of these two diametrically opposed escape routes from the middle class are small, but they seem large because they are so highly visible. Teachers should not fall into the trap of assuming that these two groups are typical of youth, even though many other youths may speak sympathetically of their values. A high proportion—probably a majority—of youth in schools today is success-oriented or eventually becomes so. At least half of those who graduate from high school will, for example, enter college.

Prevalence of Problem Behavior among Boys. Anyone who has spent any time in schools knows that boys are far more likely than girls to cause trouble for teachers. Their propensity for getting into trouble leads to difficulties with the police as well. A check of virtually all ninth-graders in Minneapolis turned up the fact that three times as many boys as girls had juvenile court or police records or both (Hathaway and Monachesi, 1952). A glance at Figure 6-3 tells us something about the relative frequency of emotional problems for boys and girls in the third grade. Frances A. Mullen (1950), in a study of 1628 children in Chicago, found that a larger percentage of boys than girls had withdrawn, unsocial natures (7 per cent, as against 4 per cent); more boys than girls showed aggressive, antisocial behavior (6.5 per cent, against 4 per cent); and more boys had speech disturbances (5 per cent, against 2 per cent). About 85 per cent of reading problem cases are boys.

It is common knowledge that girls get better marks than boys. Boys are more likely to fail annual promotions and to be held back for a second year in the same grade. Hence Gordon Fifer's (1952) finding that a higher percentage of boys than girls were overage for their grade is not surprising. This difference not only held true for all levels of intelligence, but was also true for boys *above average* in intelligence. Although girls receive higher grades than boys, this does not necessarily mean that they learn more. Girls tend to score slightly higher than boys on standardized achievement tests, but

Educational Psychology in the Classroom

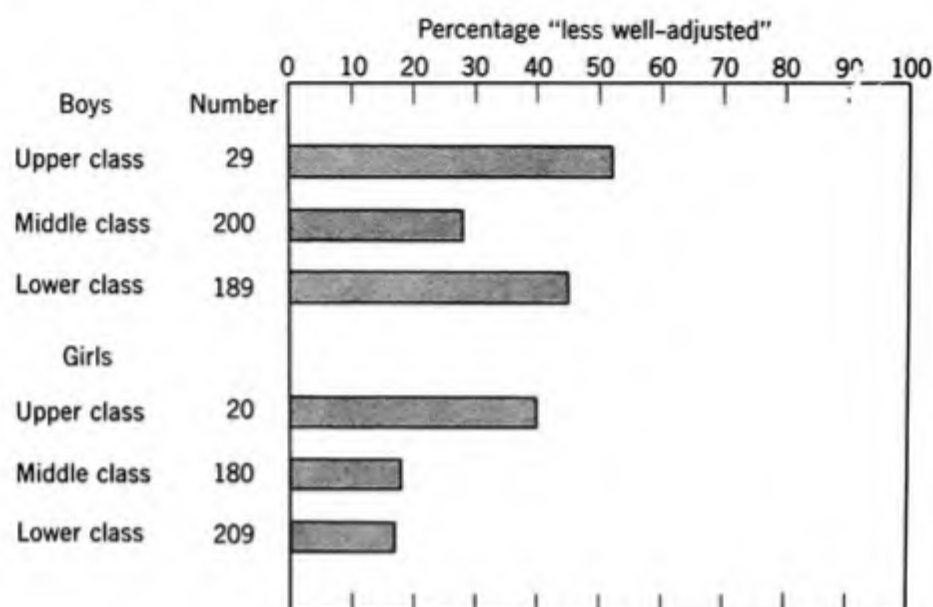


FIGURE 6-3. Percentages according to social class and sex of third-grade children rated by teachers and mental hygienists as "less well-adjusted." (Mensch et al., 1959.)

the difference is only slight and not nearly as large as the difference in academic grade averages (Tyler, 1960). Hence the superior grades that girls receive are for the most part based on something other than achievement.

A number of hypotheses have been advanced in explanation of the greater ability of girls to stay out of trouble and to gain the approval of their teachers. One is that girls are intellectually and socially more mature than boys of the same chronological age, at least until adolescence. Their greater maturity thus gives them a head start in school, and teachers tend to favor them as being more apt. Frank R. Pauley (1951) proposed that boys be admitted to school later than girls because of the rather consistent differences in achievement favoring girls in grades two through four. He found that girls got higher test scores in reading and arithmetic, even though they averaged two to three months younger than boys. Dorothea McCarthy (1953) suggests that some of the difficulties encountered by boys stem from the fact that their verbal development proceeds more slowly than that of girls. School activities place a high premium on verbal skills: they are basic to almost all the learning that takes place in the classroom.

Parents and teachers alike profess to be puzzled whenever boys do not progress as rapidly as girls do and usually decide that the boys "are just not trying hard enough." This tendency to place boys in an unfavorable light inevitably aggravates boys' problems in adjusting to the demands of the school. Elmer F. Pflieger (1947) reports, as a result of a study of the problems

of eighth-grade pupils, that boys had many more worries about school than girls did. Twenty per cent or more of the boys checked thirteen different problems relating to school, as contrasted with only three problems checked by 20 per cent or more of the girls.

Philip W. Jackson and Jacob W. Getzels (1959) did a study of mental health and classroom functioning among adolescents, the results of which appeared to show that dissatisfaction with school was part of a larger picture of generalized discontent, rather than the result of inability to function adequately in the classroom. It seems that boys tend to blame or project their feelings of dissatisfaction on the world around them and particularly on others, whereas girls tend to blame themselves. Therefore boys complain that adults are lacking in understanding and sympathy, whereas girls complain about feelings of inadequacy. These findings are to some extent supported by a survey of high school students conducted a number of years ago by H. H. Remmers and Ben Shimberg (1949) as part of the Purdue University Opinion Poll for Young People. Some of their results are reported in Table 6-5 and show that boys not only complained of more school problems, but were also somewhat more inclined to blame teachers for their difficulties. The problems reported by girls were more likely to center around feelings of personal inadequacy, as well as their problems in developing and maintaining good relations with others.

What makes these statistics particularly interesting is the fact that girls actually show greater skill in interpersonal relations than boys do. Even when they are only two years old, girls show greater interest in people than boys do (Goodenough, 1957). This greater interest in and ability to cope with others stands girls in good stead when they enter school. Not only are they able to work more effectively with their peers, but they also are able to make a better impression on their teachers. It would appear, then, that their tendency to list more problems in the areas of interpersonal adjustment does not mean that they do not get along with others as well as boys do, but indicates, rather, that they are more aware than boys are of the problems involved in getting along with others.

There are some indications that these differences in social and academic adjustment are due to something more than mere differences in rate of maturity or in interest in others. In our culture, boys are expected to display behavior that is "masculine"—to be rebellious, uncooperative, disobedient, aggressive, and inconsiderate. Ruth E. Hartley (1959) points out that the demands for "masculine" behavior are experienced by boys at a very early age, before they are able to understand what the demands are and why they are being made. She suggests that this situation is practically a perfect com-

Educational Psychology in the Classroom

TABLE 6-5. Percentages of 1194 High School Boys and 1306 High School Girls Experiencing Problems in School Work and in Personal Relations (Remmers and Shimberg, 1949)

School Problems	Boys	Girls
Difficulty taking notes	31	24
Preparing for tests	18	23
Being calm during recitation	51	60
Worrying about tests	34	52
Want courses not offered in my school	38	33
Doubt the value of the things I study	25	18
Too restless to stay in school	10	5
Courses too far removed from everyday life	13	6
Would like more vocational courses	32	26
Teachers too strict	9	5
Teachers don't understand me	11	8
Class periods not well organized	13	9
Teachers uninterested in things that interest me	14	10
Easily excited	14	32
Trouble keeping my temper	27	38
Worry about little things	26	44
Nervous	21	32
Can't stop daydreaming	29	41
Often feel lonesome	16	24
Easily hurt	19	39
Want to discuss my personal problems	19	29
Afraid of failure or humiliation	17	24
Bite my nails	26	24
Feel bad if I can't get my own way	6	14
Want people to like me more	47	60
How to introduce people properly	19	14
How to treat people I don't like	19	25
Wish I were more popular	36	47
Want to make new friends	45	56
Need to develop self-confidence	31	40
Need to be more tactful	16	23
Want to learn to dance	43	23

bination for inducing anxiety: "The demand that the child do something which is not clearly defined to him, based on reasons he cannot possibly appreciate, and enforced with threats, punishments, and anger by those who are close to him." Consequently, she says, the child "overreacts" against being caught doing anything feminine to the point where he even develops hostility toward females themselves. He rationalizes this hostility by deciding that women just do not like boys and actually prefer girls. Very likely this attitude is also based on reality. The world in which the elementary school boy

lives is to a large degree a female-dominated world: the persons who are most concerned with his supervision are women. There is some evidence that the judgments women make are more likely to favor girls, perhaps because they understand girls better. When Ira J. Semler (1960) asked male and female teachers to rate fifth-grade students on intelligence, personal adjustment, and social adjustment, male teachers proved to be more accurate in judging boys, and female teachers proved to be more accurate in judging girls.

Merl E. Bonney (1944) suggests that boys drop out of churches, schools, and even homes faster than girls do because these institutions are not basically suited to typical masculine traits. In his opinion, adults in charge should be more concerned than they are with the special problems of boys. He points out that when boys fail to acquire ease and facility in social skills, they develop feelings of inferiority and discouragement and are likely to react in socially disapproved ways. (Note that one of the few personal problems mentioned by more boys than girls in Table 6-5 is "wanting to learn to dance"; another is "wanting to learn how to introduce people properly.") Bonney states that when boys are prevented from finding some legitimate outlet for their hostile feelings, they retaliate by fighting back, rebelling, or leaving the situation altogether, whether it be home, church, or school. These difficulties are made more acute for boys because on the one hand we expect them to be rebellious, but on the other hand we punish them for their rebelliousness.

It has been suggested that at least some of the problem behavior of boys is due to a kind of prejudice against boys in our culture. Evidence that such a prejudice exists is provided, for instance, by adoption agencies who report that the great majority of would-be parents prefer girls to boys. Girls are easier to live with, they say: they are compliant, submissive, cooperative, and obedient.

Whatever the causes of the larger number of problems displayed by boys, it is clear that the school, as well as the other agencies of our culture, is not meeting boys' needs as well as it is meeting the needs of girls. This is a problem area that requires far more recognition and study than educators and behavioral scientists have given it in the past.

Discouragement as a Factor in Problem Behavior. The major factor that underlies most misbehavior, according to Rudolf Dreikurs (1957), is discouragement. Children whose morale is generally good are inclined to do the things that are expected of them, provided, of course, that the expectations are reasonable. If a child's morale is good, he sees some point in trying to learn and to behave in socially acceptable ways. The child who is discour-

aged may behave in disruptive ways in the classroom because he sees no point in being cooperative and agreeable. His misbehavior is what Dreikurs calls an "attention-getting mechanism," because it serves the purpose of drawing attention to him. Discouragement may express itself in other ways as well: reading problems, withdrawing behavior, or even in attitudes of extreme dependence. Some children who are extremely dependent are able to express their dependence in a charming and attractive way that serves to flatter the teacher's ego. Dreikurs says:

They do exactly as they are told, pleasantly tempting the teacher to give them special attention and help. They adore and worship—but have little initiative of their own. Because they are so pleasant, nobody bothers to redirect them. Their discouragement, which is the basis for their passivity, does not become apparent, at least so long as they can gain attention without irritating through their passivity. They are much more discouraged than children who use active-destructive methods to gain attention. The latter can be induced to use constructive methods, if such channels are opened to them; but it is difficult to change a passive child into an active one.

The task of encouraging students, of restoring their sense of adequacy and optimism is not an easy one. It cannot be accomplished by giving them "pep talks" and telling them how able they really are. Often such approaches only increase the discouragement they feel. Some of the ways in which educators can help students develop more positive attitudes toward themselves and the tasks of learning are discussed in Chapter 12.

Unfortunately, the school itself often contributes to the child's sense of discouragement by setting perfectionistic standards and by making failure appear disgraceful. A certain amount of failure is normal in learning—no one ever did everything successfully the first time he tried. Although it is difficult to get some teachers to relax their perfectionistic standards and to take a more constructive view of the place of failure in the learning process, the problem of getting parents to develop more supportive attitudes toward their children is even greater. Some parents display a great deal of anxiety when their child is not at the head of his class and become upset at any indication that his performance is anything less than "perfection."

Middle-class parents have always placed a high value on educational success, but in the last few years they have come to direct an even higher degree of concern and anxiety to this subject. Perhaps one factor that has heightened their degree of concern is the realization that colleges and universities may not be able to accommodate all high school graduates who apply, with the inevitable result that competition for admission will become keener in the

future. Furthermore, we seem to be developing a cultural pattern in which the chief difference between the "haves" and the "have-nots" is a college degree. Consequently, when a middle-class parent discovers that his first-grade son is not learning to read or his ninth-grade daughter is failing algebra, his anxiety knows no bounds. Even when children are making good progress in school many a middle-class parent feels that they should be doing better. If they are making B's, they should be making A's, and if they are making C's, this is inexcusable. If the school has a policy of no assigned homework in the elementary school (a policy amply justified by research on this subject), parents complain that children are not working hard enough. Often parents try to justify the rather extreme pressure they bring to bear on children and on the school on patriotic grounds.

We shall have more to say on this subject in the chapters dealing with popular beliefs about education and with the psychology of being a teacher. We mention it here because the pressures that parents bring to bear on children aggravate rather than help the adjustment problems that each child has to cope with as part of his educational experience. Parents who are never satisfied with the progress their children are making are creating situations in which children are bound to fail. Children who can never come up to their parents' expectations are children who are in danger of developing deep-seated feelings of inferiority and discouragement. Although we have not as yet had sufficient time to appraise the effect that the recently increased number of anxious parents has on the adjustment and progress of children, it would appear from what we already know about the dynamics of child behavior that too much discouragement is bound to have an adverse effect on children's ability to learn and to function effectively in the classroom.

School Policies and Conditions That Are Detrimental to Mental Health.

Still another problem that is caused or aggravated by discouragement is cheating. Essentially, the student who cheats is one who has become discouraged about behaving in more constructive and acceptable ways. Perhaps he has become panicky about failure, or perhaps he has become cynical, deciding that if adults are more interested in grades than in intellectual growth or learning, it does not really matter how the grade is obtained.

There is a direct relationship between "academic pressure" and cheating. A survey made by the author of the relationship between grading practices of college faculty members and cheating by students turned up the fact that students were much more likely to cheat in courses taught by faculty who gave higher-than-average percentages of D's and F's and lower-than-average percentages of A's and B's. Another survey showed that students tended to feel that the more anxiety and hostility were aroused by the instructor and

his testing methods, the more justified they would feel in cheating and permitting others to copy their papers (Steininger, Johnson, and Kirts, 1964). The extent to which cheating takes place is shown by a poll of high school students by R. E. Horton and H. H. Remmers (1953), who found that 50 per cent of the boys and 43 per cent of the girls cheated "frequently" or "sometimes"; whereas only 4 per cent of the boys and 5 per cent of the girls said that they never cheated. On the other hand, three quarters of the students of both sexes said that cheating was wrong and should be punished. In other words, most of those who cheated did not approve of their own conduct.

Although there may be a certain degree of validity in the practice of blaming cheating on family background and on the easy tolerance of dishonesty in today's society, it seems obvious that schools themselves create the kinds of conditions that make cheating prevalent. The more a school attempts to increase the anxieties of students by undue emphasis on competition, grades, and superficial evidence of academic competence, the more likely students are to display various forms of problem behavior, including cheating. The really superior student is less likely to cheat, according to a study done by Ray R. Canning (1956). Evidently, such students are more likely to feel competent and adequate and are less likely to be discouraged. Canning also found that the introduction of an honor system reduced the amount of cheating, contrary to what might be popularly supposed. It is possible that students feel encouraged by the willingness of teachers to trust them.

There are other characteristics and practices of schools that produce or aggravate problem behavior. Many teachers and administrators appear to assume that adults are always right and children are always wrong. Any program that consistently places the comfort, convenience, and needs of adults above the needs of children is likely to produce problem behavior. This does not mean that the needs of adults should be ignored; rather, it is a question of emphasis. It is understandable how we might come to ignore the psychological needs of children without meaning to do so. There are all kinds of very human reasons why we should act on our own behalf and in accordance with our own needs and standards. Even when we *think* we are acting on behalf of children, we need to be careful that we do not interpret *our* psychological needs as theirs.¹

Another aspect of the school that commonly leads to the development of behavior problems is the stress on conformity. Children need to learn to conform, of course; the security of our society depends on the observance of

¹ See the discussion of psychological and normative needs on page 30.

laws, customs, and common courtesies. But the practice in many classrooms is to go far beyond these considerations and to insist on conformity in everything. Not only does this emphasis on conformity work to stamp out individuality, spontaneity, and interest, but it encourages apathy and discouragement. Children like to pattern some of their behavior after that of adults; this is a normal and natural process of growing up. But when these patterns are forced upon them in inappropriate and unnecessary ways, children come to feel that their own ideas are worthless. Many of them develop difficulties in thinking and acting for themselves in the classroom as well as in life outside the school. Some children revolt against these unnatural standards and display the kind of problem behavior that plagues teachers and administrators. But even these children are not really free of the bonds of conformity. Usually their rebellion is just as rigidly patterned as the behavior of the most docile and submissive pupil. They, too, are unable to think for themselves but can only rebel.

There are other ways in which the learning situation provided by the school produces and aggravates problem behavior, but they have a common base: the reluctance or inability of adults to understand the meaning of child behavior. Equally important is the need for adults to understand the meaning of what *they* are doing to children. It is as important for us to understand ourselves as it is to understand the children we teach. It does not help very much to understand the background of a given child's problem behavior when we continue to aggravate that behavior unknowingly by unsound school practices.

Ways in Which Schools Can Improve Mental Health. As far as the emotional health of most children is concerned, the positive contributions of the school outweigh the negative ones. For one thing, the school offers a variety of opportunities for children to learn satisfying ways of working and playing together. The aid it provides in helping children develop the necessary skills for what is called "group living" is of vital importance, inasmuch as the mental health of any person depends, in part, on his ability to develop sound relationships to and with other people. One of the most important skills children can learn at school, or anywhere for that matter, is how to express their feelings without injury to themselves and others. Some children express themselves through problem behavior because they have not learned more acceptable ways of self-expression.

The school also provides a reasonably stable environment in which children may develop and learn. Its hours are regular, its demands and expectations are well defined, and it is governed by rules and regulations. For

Educational Psychology in the Classroom

TABLE 6-6. List of Punishments Used in a North Carolina School in 1848 (Coon, 1915)

No.	Rules of School	Lashes
1.	Boys & Girls Playing Together	4
2.	Quareling	4
3.	Fighting	5
4.	Fighting at School	5
5.	Quareleing at School	3
6.	Gambling or Beting at School	4
7.	Playing at Cards at School	10
8.	Climbing for Every foot Over three feet up a tree	1
9.	Telling Lyes	7
10.	Telling Tales Out of School	8
11.	Nick Naming Each Other	4
12.	Giving Each Other Ill Names	3
13.	Fighting Each Other in time of Books	2
14.	Swaring at School	8
15.	Blackgarding Each Other	6
16.	For Misbehaving to Girls	10
17.	For Leaving School without Leave of the Teacher	4
18.	Going Home with Each Other without Leave of the Teacher	4
19.	For Drinking Spirituous Liquors at School	8
20.	Making Swings & Swinging on Them	7
21.	For Misbehaving when a stranger is in the House	6
22.	For Waring Long Finger Nailles	2
23.	For Not Making a bow when a Stranger Comes in or goes out	3
24.	Misbehaving to Persons on the Road	4
25.	For Not Making a Bow when you Meet a Person	4
26.	For Going to Girls' Play Places	3
27.	Girles Going to Boys' Play Places	2
28.	Coming to School with Dirty Face and Hands	2
29.	For Caling Each Other Liars	4
30.	For Playing Bandy	10
31.	For Bloting Your Copy Book	2
32.	For Not Making a bow when you go home and when you come away	4
33.	Wrestling at School	4
34.	Scuffling at School	4
35.	For Not Making Bow when Going out to go Home	2
36.	For Weting Each Other Washing at Play Time	2
37.	Girls Going to Boys' Play Places	2
38.	For Hollowing & Hooping Going Home	3
39.	For Delaying Time Going home or Coming to School	4
40.	For Not Making a Bow when you come in or go Out	2
41.	For Throwing Anything Harder then your trab ball	4
42.	For every word you mis In your Heart Leson without Good Excuse	1
43.	For not saying yes Sir & no Sir or yes marm or no marm	2
44.	For Troubleing Each others Writing affares	2
45.	For Not washing at playtime when going to Books	4
46.	For Going and playing about the Mill or Creek	6
47.	For Going about the Barn or doing Any Mischief about the place	7
November 10, 1848		Wm. A. Chaffin

many children, school provides the only stable, secure, and predictable experience in their lives. As one psychologist has put it, schools give a second chance to children who were not too fortunate in the selection of their parents. It is important for children to have experiences with a well-organized, controlled, and stable environment, just as it is important for them to have experiences which permit freedom of thought, expression, and action.

The school is an institution that is dedicated to children. The adults who direct its activities and formulate its policies are for the most part sincere and conscientious individuals. Although school people, being human, generally find it easier to follow conventional and traditional ways of doing things, they have, through the years, gradually shifted their attitudes and practices in accordance with their growing understanding of children. Our best hope for eliminating or reducing problem behavior lies in our changing point of view toward children and toward educational methods.

Evidence that our point of view *is* changing is provided by the fact that schools are much pleasanter places than they used to be. Although physical punishment is still used in many schools, perhaps even in the majority, it is employed much less frequently than formerly. Just by way of contrast, look at the punishments prescribed for misbehavior by a schoolmaster a century ago (Table 6-6). Today, psychological and psychiatric services are becoming available for use by school personnel in an increasing number of communities. The fact that the demand for these services far exceeds their availability is evidence of the extent to which the educational profession is developing an understanding of the emotional causes of problem behavior and is seeing it as something that calls for treatment, rather than punishment. Attendance officers used to be called "hookey cops." Today, the trend is for them to function as social workers, because we have discovered that the problem of nonattendance is one that is primarily psychological and sociological, rather than legal.

The main trends in the programs developed by schools to deal with problem behavior have been outlined as follows by William G. Hollister (1959), consultant to the National Institute of Mental Health:

1. *Increased use of consultation to strengthen classroom guidance of behavior.* This refers to the use of guidance workers, school psychologists, school social workers, and the like as consultants for teachers.

2. *Wider employment of group methods of behavior guidance.* More teachers are using devices such as sociometry and group discussion, and are taking in-service courses concerned with psychological factors of group behavior.

3. *Greater emphases on teacher-parent cooperation.* An increasing number of parents are sharing in school life, and many of them expect teachers to discuss children's behavior in psychological terms.

4. *Greater concern about psychological factors in human behavior in teacher education.* This applies to preprofessional education, but particularly to in-service educational experiences.

5. *Wider interest in the evaluation process.* School personnel are showing increased interest in assessing various aspects of the school program in terms of their effect on the mental health of children.

6. *Increased interest in introducing material on human relationships into the curriculum.* For example, curriculum guides and textbooks today contain more material than they formerly did on such subjects as mental health, human relations, family relationships, and other aspects of human behavior.

What these trends amount to as far as the classroom teacher is concerned is that (1) more understanding is being expected of him and (2) more consultants and resource people are being mobilized to aid him. The problem behavior that occurs in the classroom of a certain teacher is more likely to be perceived as the responsibility of the school as a whole, including its administrators and staff of psychological consultants.

The attitude that underlies most of the changes that have taken place in school practice is the growing respect we are developing for the child as an individual. The easier it is for us to respect and accept him as an individual, the easier it becomes for us to understand him. It is much easier to understand and communicate with a person whom we respect and value. And as the relative value of children as individuals approaches that of adults, the effectiveness of the school will increase. Furthermore, as the school increases its effectiveness and becomes more of a genuine laboratory for learning than it has been in the past, it will be less likely to cause or aggravate problem behavior. As these changes take place, the school will become a place where children with problems—and all children have problems at some time or other—can learn to develop patterns of behavior that are healthier and more effective.

SUMMARY

Problem behavior is a matter of major concern for many teachers. Although much problem behavior calls for special consultation or referral, teachers nevertheless need to develop some understanding of it because the "problem child" usually remains in the classroom even while treatment is

going on. Furthermore, teachers should be aware of the relationship between problem behavior and learning problems, as well as of the forces and factors in the school that create or aggravate emotional problems. Although children who display severe problems constitute only a small percentage of the total school population, they exert a disturbing force far beyond their numbers. The student with the "conduct problem" is more likely to come to the attention of the teacher, because of his aggressive, disturbing behavior. However, students whose problems are more in the nature of "neurotic" or "personality" maladjustments, as well as those who are emotionally and socially immature, may also be having difficulties with learning. Actually, all students are bothered with problems of emotional and social adjustment to some degree, although the problems are not usually severe or numerous enough to produce the kind of gross disturbances that underlie or accompany chronic problem behavior. The so-called "problem child" is one who has more than the usual amount of problems, and is more severely troubled by them than most children.

Although adults who have to deal with children displaying problem behavior are easily tempted to treat it directly—through punishment, for example—such an approach often does not produce the desired results. Treatment of problem behavior has a better chance to succeed if it is based on understanding of what lies behind the disturbance. However, understanding problem behavior is not an easy task; sometimes it is necessary to call on psychological or psychiatric experts for special help.

One of the reasons why problem behavior is difficult to understand is that it serves as an escape from or defense against anxiety. There are many different kinds of maneuvers that people use unconsciously as ways of coping with anxiety or tension. They are termed "mental mechanisms," "defense mechanisms," or "escape mechanisms." These mechanisms have this in common: they are learned patterns of behavior, directed at reducing or eliminating anxiety, rather than solving problems that are the basic cause of the anxiety.

Problem behavior is often produced or aggravated by emotional conflicts. One of the commonest conflicts encountered by the teacher is that of the student who comes from a home where the values and acceptable patterns of behavior are in direct contrast to those of the school. When such a student finds that he is unable to please or satisfy both his family and his teacher, he is likely to express his conflict through some sort of problem behavior. Other common conflicts are those produced by friction between adults and adolescents, and by the contradictions in the standards of behavior specified by children's peer groups on the one hand and adults on the other.

Problem behavior is commoner among boys than among girls. Boys mature less rapidly in social and linguistic skills, hence do not get along at school as well as girls. There is also some basis for believing that our expectations that boys will follow male patterns of development—that is, will be rebellious, resistant, uncooperative, and aggressive—have some relationship to their greater tendency to display problem behavior. Inasmuch as school is identified with the “feminine” patterns of conformity and submission, the problem of adjusting to school becomes very complex and difficult for many boys.

Problem behavior is to a large degree caused or aggravated by the sense of failure and discouragement that many students develop as a result of their school experiences. The stress schools place upon conformity and the emphasis received by competition are two other sources of difficulty that often lead to problem behavior. On the other hand, there are other factors and forces in the school environment that foster good mental health and help to reduce or eliminate problem behavior. For example, students have opportunities in school to learn how to work and play together cooperatively and to express themselves in ways that are both satisfying and socially acceptable. Most students learn these skills to some degree; the problem child is one who is unwilling or, more likely, unable to learn them. Schools also provide a climate of stability and predictability—qualities which help to foster emotional security. However, what is probably of greatest importance is our changing attitude toward children and educational methods. As we develop greater respect for children as individuals, we are enabled to broaden and deepen our understanding of them and improve the ability of the schools to foster mental health and, incidentally, prevent the development of problem behavior.

SUGGESTED PROBLEMS

1. When a teacher says, “I have a couple of behavior problems in my class,” what kind of behavior is he likely to be referring to? What kind of behavior problems are teachers more likely to overlook? Why?

2. Look over the list of problems reported by mothers in the study by Mensh and his associates (Table 6-3). Less than half the problems that they reported had any relationship to problems reported by teachers and mental health workers in the classroom. Suggest some hypotheses that might account for this discrepancy.

3. There have been a number of unexplained thefts around Broderick Junior High. Today, Miss Jackson solved the mystery when she caught

David, a seventh-grader, going through her desk. David's father says that he has punished the boy before for stealing things, but this is the most serious offense so far. He thinks that the boy merits a good sound thrashing and confinement to the house every weekend for a month. Mr. Machek, the school principal, wants to refer David to the Child Guidance Center, but Miss Jackson is inclined to agree with David's father, who wants to handle matters *his* way. Without knowing anything more about David's father or Miss Jackson than is given here, why do you think David's father would rather punish his boy than have him referred for treatment? Why do you think Miss Jackson agrees with David's father, rather than with the principal?

4. Psychologists state that we employ behavior mechanisms because they serve an important purpose or function. In view of the fact that behavior mechanisms seem to be silly or useless or even deceitful, how can one justify saying that they have any value?

5. Read the brief case incident regarding Doris and Miss Ogilvie on page 187. Why do you suppose Doris thinks Miss Ogilvie does not like her? What is probably at the root of Doris' problem?

6. In this chapter we have discussed some of the reasons why boys are more likely than girls to develop problem behavior. List five things that schools might do to aid boys in making a better adjustment to school and indicate why you think they will work.

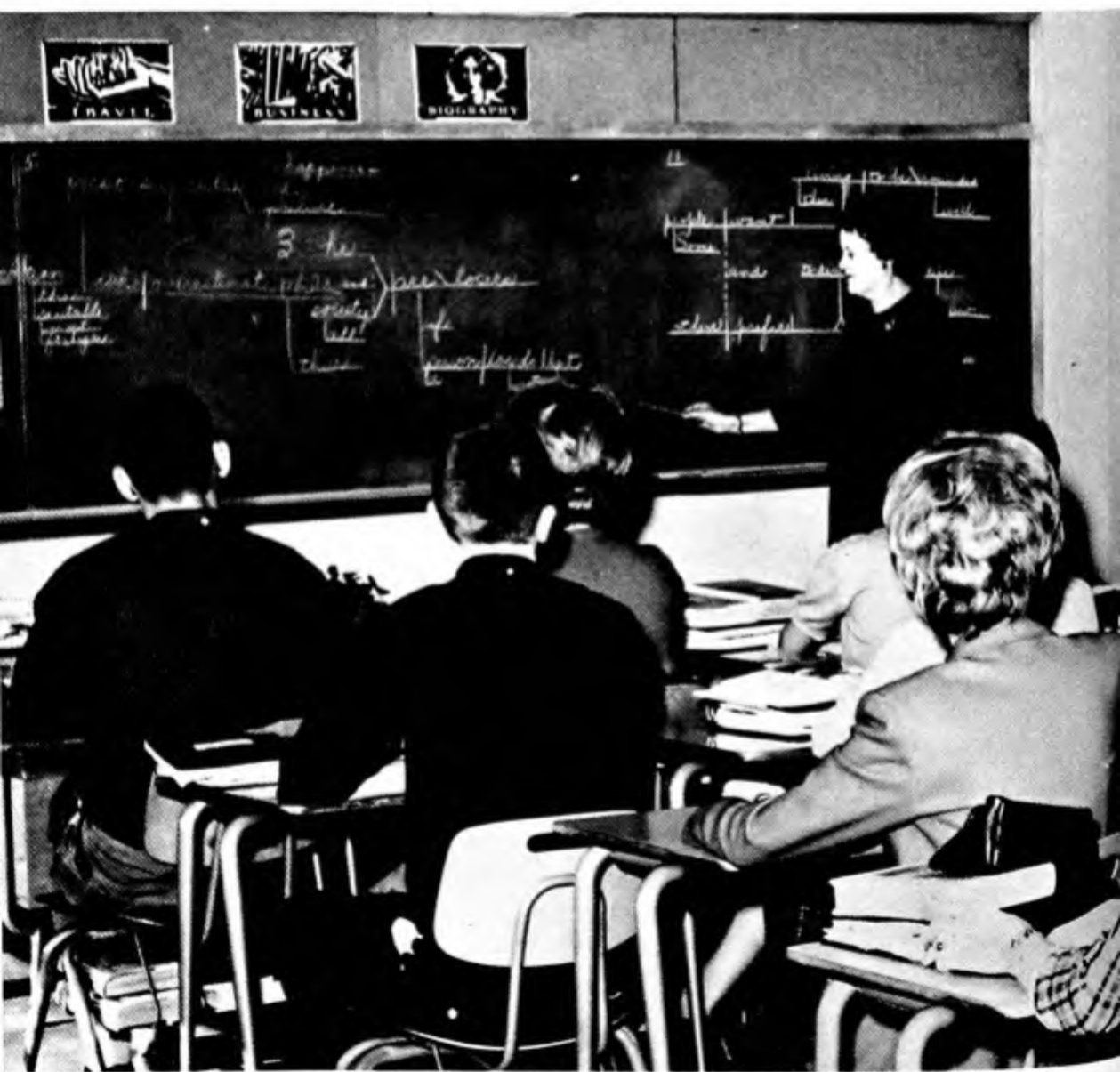
SUGGESTED READINGS

- Dinkmeyer, D. C., *Child development: the emerging self*. Englewood Cliffs, N.J.: Prentice-Hall, 1965. See especially Chapter 11, "Personality development."
- Dinkmeyer, D. C., and Dreikurs, R., *Encouraging children to learn: the encouragement process*. Englewood Cliffs, N.J.: Prentice-Hall, 1963. Further discussion of the problem of discouragement in children, how it interferes with learning, and how it may be dealt with.
- Dreikurs, R., *Psychology in the classroom: a manual for teachers*. New York: Harper, 1957. An analysis of the psychological factors underlying problem behavior in the classroom.
- Henry, N. B., ed., *Mental health in modern education*, 54th Yearbook, Part II, of Chicago Press, 1955. A collection of essays by outstanding educators and psychologists.
- Krugman, M., ed., *Orthopsychiatry and the school*. New York: American Orthopsychiatric Assn., 1958. Discussions of psychological and psychiatric aspects of problem behavior in the school.

Educational Psychology in the Classroom

- Lindgren, H. C., *Psychology of personal development*. New York: American Book, 1964. The first seven chapters are concerned with mental mechanisms and other problems of personal adjustment.
- Mead, M., *Male and female*. New York: Morrow, 1949. Anthropological findings regarding sex roles in primitive societies and their implications for our culture. Sheds light on the problem of why boys and girls behave differently and have different attitudes toward school.
- Sarason, S. B., et al., *Anxiety in elementary school children*. New York: Wiley, 1960. A report on some very intensive research on this subject. The last chapter, "Implications for education," is particularly recommended.
- The teacher and mental health*. U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 385. Washington: Government Printing Office, 1962.
- Torrance, E. P., *Mental health and achievement: increasing potential and decreasing dropout*. New York: Wiley, 1965. Discusses the role of mental health in helping children achieve their best potentialities and suggests how instructional methods may aid such achievement.
- The following textbooks deal with problems of mental health and problem behavior in the schools:
- Kaplan, L., *Mental health and human relations in education*. New York: Harper, 1959.
- Lindgren, H. C., *Mental health in education*. New York: Holt, Rinehart, and Winston, 1954.
- Redl, F., and Wattenberg, W. W., *Mental hygiene in teaching*, rev. ed. Boston: Houghton Mifflin, 1959.
- Seidman, J. M., ed., *Reeducating for mental health*. New York: Crowell, 1963.

7 Traditional Beliefs and Ideas about Learning



David Stanley from Monkmeier

The Learning Process. Educational psychology, as we stated in the introductory chapter, is concerned with the learner, the learning process, and the learning situation. The five chapters that have preceded the present one have been largely concerned with understanding the learner, although in studying him, we have had to take into account both the learning process and the many different kinds of situations that serve as the background for his learning experiences. We cannot study the development of children and adolescents without considering the habits, attitudes, and character traits that they develop as a result of learning, or the situations that help determine habits, attitudes, and character traits.

In this chapter and the two that follow, we shift our focus to the learning process itself. In doing so, we have to keep both learner and learning situation well in mind, because all three elements must be considered in relation to one another. It is important, too, to remember that all human behavior, including learning, occurs as an integrated whole, and that any attempt to isolate any single aspect even for the purpose of analysis and discussion in a sense violates this essential unity. The piston in a gasoline engine operates in relation both to the other parts of the engine as well as to the intermittent explosion of vaporized gasoline. We may stop the engine, dismantle it, and pull out the piston in order to study it and thus gain a better understanding of it, but to understand its function in the fullest sense, we have to keep in mind its relation to the operation of the engine as a whole. Similarly, when we study the learning process, we must remember that it has no separate existence in and of itself. We emphasize this point because there is the danger—psychologists are sometimes guilty of this, too—that we may think of “learning” as something that can be filtered out of human behavior and experience and thus studied as a thing apart.

Everyone Has Some Kind of Theory about Learning. Most of us take learning for granted. That is, we take it for granted until we encounter difficulties in learning or until we have to teach somebody something. On such occasions we are likely to fall back on one or more "tried-and-true" techniques, "tried and true" because they are a part of our cultural heritage. Indeed, such techniques are so much a part of "what everyone knows" that they may even be referred to as "common-sense principles of learning." What are these principles? Well, before we discuss them, and before you read any further in this chapter, read the following true-false questions, answering them in accordance with what you really believe:

- T F 1. Whether students will do well in class depends on whether they are rewarded by their teachers for good work (through good marks, praise, honors, awards, and the like).
- T F 2. Whether students will do well in class depends on whether they are punished for poor work (through low or failing marks, reprimands, and the like).
- T F 3. In other words, whether a student learns at all will depend on the extent to which he is rewarded or punished by his teachers.
- T F 4. Learning, particularly in subjects such as history, science, and social problems, is primarily a process of acquiring and absorbing facts.
- T F 5. Once students *really learn*, as a result of having been *taught properly*, they will retain what they have learned.
- T F 6. One of the best ways to teach a child is to show him the difference between correct and incorrect ways of doing things.
- T F 7. The best way to learn a new skill is to have the teacher present it one step at a time.
- T F 8. The really important and significant things in life are not learned easily because they take a lot of hard, unpleasant work, whereas things that are learned easily and pleasantly are not likely to be of much value.
- T F 9. Students cannot be forced to learn if they do not want to, because "You can lead a horse to water, but you cannot make him drink." Therefore, the best way to get students to learn is to make sure that "learning is fun."
- T F 10. In order to function adequately in a subject or a field, students must first be introduced to and have a thorough understanding of the key principles involved.

The above statements, contradictory though some of them are, are more or less consistent with "what everyone knows about education." Many people would even term them "common sense." Everyone "knows," for example, that children learn primarily because they are rewarded or punished; that students who cannot spell, write grammatically correct English, or multiply

fractions have not been taught properly; that learning consists of adding facts to one's "storehouse of knowledge"; and so forth. Perhaps it is going a little far to call these ideas "theories," but there is plenty of evidence that most of us, teachers and laymen alike, make use of these concepts in our own efforts at learning or in planning and directing the learning of others. The kind of "learning theory" that we subscribe to may be readily inferred from the way in which we deal with learning problems. Concepts like those embodied in the true-false questions above are, in effect, "*implicit* theories of learning"—implicit in the sense that the theory is *implied* by the way in which we go about the tasks of learning or teaching.

Let us say, for example, that you have to memorize a speech. If your approach is that of memorizing each sentence until you have the entire speech committed to memory, it can be inferred that you subscribe to a theory that learning is more successful if undertaken one step at a time. If the parents of four-year-old Tommy let him have dessert if he eats his food properly without complaint, but withhold dessert if he balks or eats messily, it can be inferred that they are conforming to a theory that a child's success in learning depends on the application of reward and punishment. Here is an example of the way in which teachers reveal their beliefs or theories about learning:

The annual basketball game between the 9A and the 9B grades of the North Point Junior High School was usually marked by excitement and partisan enthusiasm, but this year the spectators were unusually noisy. With five minutes to go in the game, the score stood at 48 even. At this point, a 9B boy committed a foul, and a 9A boy got a free throw. As he stood, poised, concentrating on the throw, the 9B rooting section started to whistle and stamp. When the referee held up his hand to stop the noise, he was loudly booed. It was not until he threatened to stop the game that the group finally quieted down.

At a faculty meeting later that afternoon, several of the teachers expressed great concern about the unsportsmanlike behavior of the 9B's. Although some teachers were not inclined to take a very serious view of the matter, the teachers who had 9B classes agreed that the incident would be used as a basis for class work the next week.

The next day Mrs. Del Carlo gave her 9B English class a lecture on good sportsmanship that included pointed reference to their behavior the previous day. She then assigned a thousand-word theme on the topic: "Why good sportsmanship is important."

In a classroom a few doors away, Mr. Volker told *his* 9B class of the decision to use their behavior as a subject for classroom work. He then called for reactions. At first the students were somewhat resentful and belligerent, feeling that the assignment was an unwarranted imposition, but as the discussion continued, a number of them admitted that they had really been ashamed of the way the class

had behaved. Mr. Volker then asked what the group wanted to do about the matter. As class members made proposals, he wrote them on the blackboard. There were a dozen suggestions in all. After further discussion and planning, a number of committees were formed to work on various assignments based on the proposals. One group was going to meet with the principal, the physical education teachers, and the student council to see what could be done to prevent the future occurrence of such incidents. Another group wanted to find out why good sportsmanship was important. Two other groups were going to debate the merits of having organized cheering sections as a way of keeping spectator behavior under control.

Let us go back over this anecdote to see how the behavior of the teachers indicates their beliefs or implicit theories about learning.

The decision of the teachers to use the conduct at the basketball game as a subject for classroom work was based on the assumption that an event in the immediate or recent experience of children is a good starting point for learning. They felt that the unsportsmanlike behavior of the 9B's showed the need for correction and that the sooner it was begun, the more effective the learning of proper behavior would be.

Mrs. Del Carlo theorized that the 9B's behaved as they did because they had not learned proper modes of conduct. She therefore believed it was her responsibility to *tell* them what the proper modes of conduct were and wherein they had been violated. She then assigned the task of writing a theme as a kind of *drill* that would help students master the principles she had outlined for them. It is implicit in her behavior that she believes that learning results when a student is told something by a teacher and is required to repeat it back to the teacher.

Mr. Volker's conduct indicates that he believes that the enunciation of principles of proper conduct is more effective when it comes from the students rather than from the teacher. The fact that he does not lecture implies that he feels that telling students is a less effective way of promoting learning. Like Mrs. Del Carlo, he believes that students learn through some kind of activity, but he does not think that drill, as such, is very effective. He evidently feels that the learning activity that students engage in is more effective when undertaken more or less on their own initiative, rather than at the initiative of teachers. Therefore he had his students select the activities to be undertaken in this project. Mrs. Del Carlo believes that learning proceeds most effectively when it is initiated and directed by teachers; Mr. Volker believes that it proceeds more effectively when students take a hand in its initiation and direction.

The parents and the teachers whose approaches to learning we have described in the past few pages hold a variety of beliefs or implicit theories

about learning, some of them old, some of them new. It is our intention in this chapter to examine some of the older, more traditional beliefs, because these are the beliefs that are basic to most of the attitudes and behavior of teachers and lay people alike regarding the processes of teaching and learning. These beliefs are so much a part of our everyday thinking that we regard them as *universal, natural truths*—as “common sense.” To be sure, most of these theories possess some measure of truth and may even seem to be effective at times, but most of them are based on an inadequate understanding of learning processes and are hence to a large extent inefficient, if not ineffective. To use the term we employed in the introductory chapter, they are “pre-scientific.”

We are devoting this entire chapter to the discussion of beliefs that are a part of “what everyone knows about learning” for the simple reason that “knowing” something that is not so, or is at best questionable, can prevent the development of any real understanding of the teaching-learning process. If we think that we already know how learning takes place, we are not likely to learn anything new about the process, particularly if the new concepts are contradictory to what we already “know.” Therefore, popular beliefs about learning have to be unlearned or set aside if we are to gain any new insights. Unfortunately, most of the teaching and educational planning that takes place throughout the world is based on outmoded and ineffective concepts of the teaching-learning process. The fact that students do learn is ordinarily taken as evidence that popular theories about learning “really work,” but evidence shows that they are highly questionable and that students often learn in spite of teachers’ theories, rather than because of them.

The Belief That Learning Occurs because the Learner Has Been Rewarded or Punished. The basis for this theory is that people tend to do the kinds of things they find satisfying. This is the theory that is followed by Tommy’s parents when they give him dessert when his manners are satisfactory. The idea is that proper behavior becomes associated with satisfactions and thus becomes habitual.

There is both truth and fallacy in this theory, just as there is in most traditional and popular beliefs about learning. It *is* true that people will normally try to behave in ways that are rewarding and satisfying. This is a principle that has been demonstrated repeatedly by experimental psychologists. B. F. Skinner of Harvard University prefers the term “reinforcement” to “reward,” and maintains that all learning takes place through the reinforcement of responses. But rewards often do not reinforce learning at all, as when there is a long delay between the appearance of the behavior that is to be learned and the presentation of the reward. An example of this is a course in which students do not know how they have done until they receive their



"I'll eat it. But I won't SWALLOW it!"

Hank Ketchum, Post-Hall Syndicate, Inc.
(Reproduced by permission.)

Traditional methods of dealing with children's behavior are often better at obtaining a superficial conformity than they are at obtaining the desired results.

report card. Nor can a reward be considered reinforcing when it is perceived by students as a kind of punishment.

Miss Chapman wanted to reward Timmy for having turned in the best social studies notebook; hence she suggested to the boys that Timmy be the lead-off batter when they played fungo during morning recess. The boys agreed, although being lead-off was usually reserved for the more popular boys in the class. Timmy did not react to this honor as Miss Chapman expected. He was somewhat shy and awkward when it came to sports and would rather do almost anything than be lead-off in fungo. On the way to the play yard he caught up with Ray, one of the leaders in the class, and asked him to bat first instead. When Ray agreed, Timmy felt much better.

Before continuing with our analysis of reward-based learning, we should consider its mirror image, punishment-based learning, because the two ideas are often used together, as when Tommy's parents offer him a choice of reward for good manners and punishment for poor manners.

In actual practice, teaching tends to be more punishment- than reward-

oriented. When we are teaching someone, we somehow become more responsive to his errors than his successes. "Doing things right" seems to be "normal" and not worthy of comment; "doing things wrong" calls for correction and criticism. It really does little good for us to say, as we often do, that such correction and criticism is uttered with the best of intentions, that we only want to help the learner, and that if he really wants to learn, he should take it in the spirit in which it was meant. It does little good to say this, because most people, and children are no exception, develop negative feelings when they become the target for correction and criticism, that is, they become depressed, irritated, discouraged, anxious, or apathetic—whatever their habitual mode of response to psychological threat happens to be.

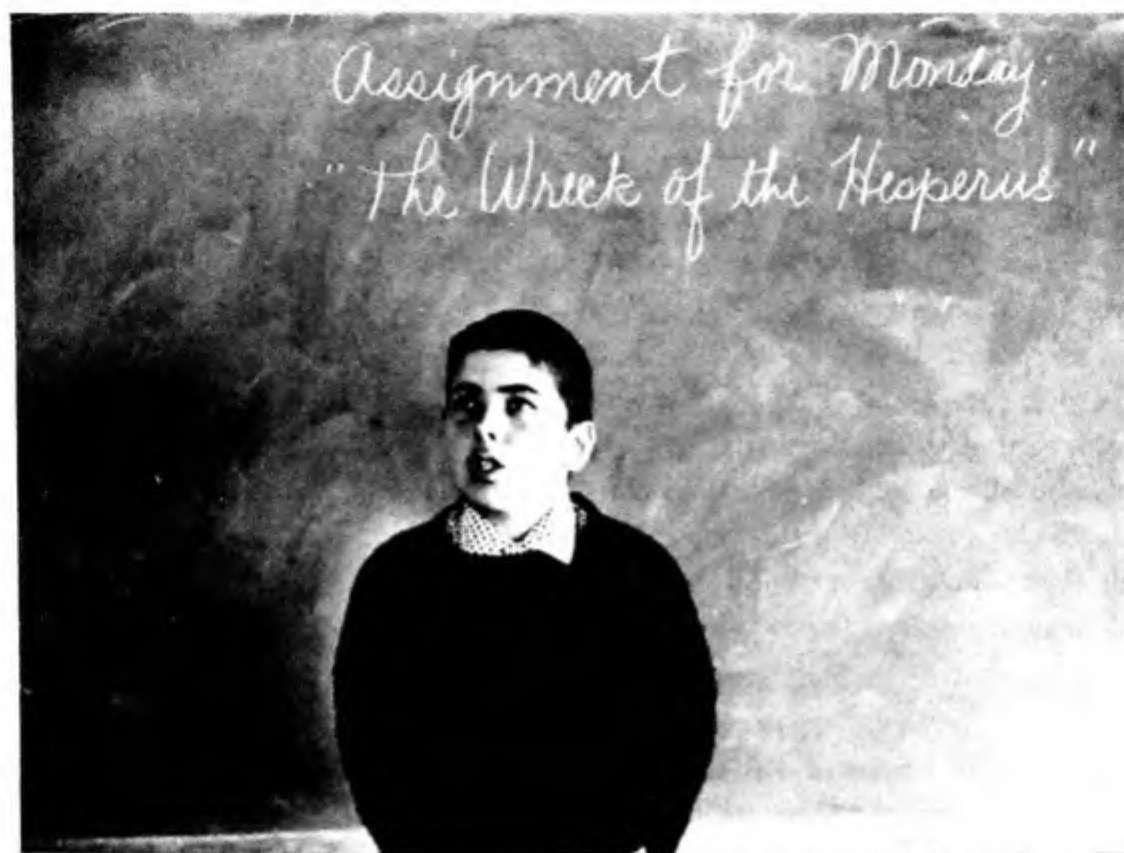
There is no doubt that the coupling of reward and punishment often "gets results" with students, but all too often the results are not in the direction of positive learning—that is, intellectual growth. What often results instead is a kind of blind obedience, an obedience that is conditional on the presence of the authority of the teacher. The repeated application of reward-and-punishment principles makes the teacher the central figure in the learning situation. If rewards and punishments are administered appropriately, learning will presumably take place. The teacher, in other words, takes on the burden of responsibility for seeing that learning takes place, and it is thus assumed that if he neither rewards nor punishes, he is not teaching and there will be no learning.

As a result of our commitment to reward-and-punishment principles in learning we have come to confuse *teaching* with *control*. If the chief objective of education were that of controlling students, there is no reason why teaching could not be simply a matter of administering rewards and punishments. However, if we are concerned with the *subsequent* behavior of students, particularly the behavior they will display when we are not on hand to direct them, then we may be in for some disappointments. The question is: will they be able to solve problems successfully, undertake the tasks they are supposed to, and behave properly in other ways when teachers are not present to reward and punish them? Perhaps they will, but perhaps they will not; conformity to standards of proper behavior depends on many factors. The history of education is littered with the failures of those who believed that learning is the direct outcome of reward and punishment. Nor have employers, prison officials, military leaders, and others charged with the guidance, instruction, and control of persons placed under their supervision done any better using similar methods. Soldiers who are well-disciplined and neat under the watchful eye of the top sergeant sometimes behave in undisciplined and untidy ways when they are away on leave.

Personality patterns also complicate the value of rewards and punishments. In exploring the responses of sixth-graders to various learning situations, Gloria L. Grace (1948) found that some children showed greater gains in learning when they were praised, others learned better when criticized, and still others learned better when only neutral statements were uttered. Children who responded best to being praised tended to be well-adjusted children who got along well at school, had a need for social approval and acceptance, and showed leadership qualities. Children responding best to negative statements tended to be of two types: one, the well-adjusted, but overly conscientious child who tries hard to please persons in authority, and the other, the poorly adjusted child with many emotional problems who has very strong needs for social approval and acceptance. Children who responded best to neutral statements also tended to be poorly adjusted, but not as much as the type of child who responded well to criticism. Grace's study to some extent confirms the findings of Elizabeth B. Hurlock (1925). Hurlock praised, reproved, or ignored children who had been assigned a series of problems in arithmetic and found that praise generally produced more improvement, although the brightest children tended to be more responsive to criticism. Like Grace, Hurlock also found that children who were ignored made the least progress. Hani van de Riet (1964) found that praise resulted in slower learning among a group of very low achievers in grades 5, 6, and 7, but in faster learning with a group of normal achievers from the same grades. The low achievers responded somewhat better to reproof than to praise.

Such studies suggest that before teachers decide whether to use praise or reproof, they should ask themselves: praise or reproof for which kind of student? In order to answer such a query, teachers must have some understanding of the emotional and cognitive background of the students in question. The policy many teachers have of using the same kinds of incentives for everyone in the class also raises problems in the light of these findings. Because students respond in different ways to rewards and punishments, it would appear that a standard treatment would produce highly variable results.

Another difficulty that sometimes occurs when teachers use rewards or punishments in an uncritical way is the reinforcing of the wrong behavior. Gerald H. J. Pearson (1952) tells of a ten-year-old boy who did well in all subjects except arithmetic. Analysis of his computation showed that he was having difficulty with all combinations involving the number "3." This difficulty was traced back to the first grade, where his teacher had become irritated with his slowness in learning to write a "3" and had whacked his hands with a ruler each time he produced a badly formed "3." Instead of the boy



Chaim Lieberman

Really significant learning depends on "intrinsic" motivation—motives that stem from the student's psychological needs—rather than on "extrinsic" motivation—motives that stem from the teacher's needs.

learning to produce a perfect "3" he learned to avoid "3's" and consequently was unable to use them in computation.

Another even commoner example of irrelevant learning occurring from the uncritical application of reward or punishment is that of the student who is praised for being the "best in the class," say, in reading. He continues to excel in reading in order to earn the teacher's praise again and again. However, he will not put out any effort in arithmetic, in which he has a somewhat better-than-average ability, because he cannot be "best in the class." He has learned that he can earn the teacher's praise through reading and sees no advantage in putting any special effort into arithmetic. This is still another shortcoming of this approach to education. It focuses the attention of students and teachers on the teacher's capacity to reward and punish, instead of on the learning process and its inherent rewards. In other words, the emphasis is on *extrinsic* incentives, instead of on *intrinsic* incentives, where it should be.

Another complaint to be lodged against the reward-and-punishment theory

is that persons who use it are inclined to ignore the needs of learners. Learning is a process that is essential to the meeting of our basic needs. We cannot develop the skills and concepts necessary to meeting these needs adequately without learning. Therefore, we learn because we must, because it is a part of living and growing, and not simply because someone punishes or rewards us. Sometimes it does happen, of course, that we undertake something we might not otherwise attempt merely because we are afraid of what the teacher or the person in charge will do to us if we fail to comply. And because we try this activity we find it satisfying and therefore make it a part of our repertory of skills. But being confronted with rewards or punishments may also build up resentment and resistance to learning, to the point that we are unable to engage in the desired activity with an open mind, with the result that little positive learning takes place. Learning does not occur unless individuals feel a need to learn.

When Cal was thirteen, his mother and older sisters tried to teach him to dance. Cal wasn't interested in dancing; he wasn't even interested in knowing any girls. But the wishes of the family prevailed, and Cal muddled through a dozen dancing lessons with his sisters. He was such an inept, clumsy pupil that they eventually gave him up as hopeless. As a result of this experience, Cal developed a sense of embarrassment and inadequacy when he went near a dance floor. During his adolescent years he was unable to participate fully with his high school group, inasmuch as dancing was an important part of their social activities. He felt very much on the outside of the group until the last semester of his senior year, when he reluctantly agreed to let one of the girls in his physics class try to teach him to dance. He was surprised to find that he was not as clumsy as he had always believed. He never became an accomplished dancer, but he learned well enough to participate in the social events of the senior class during the weeks just before graduation.

If the idea that people learn because they are rewarded or punished has so many flaws in it, why is it so popular? One reason is that it is a very reassuring theory. All a teacher has to do is to reward or punish students appropriately and they will learn. The urge to find simple solutions to the complicated problems of life is universal. We do not want to be told that teaching is a complex, difficult task, one that involves an understanding of psychological needs, personalities, and motivational patterns of students. Instead, we want to be reassured that teaching is simple—just a matter of applying the proper techniques. Another reason why this belief is so popular is that it works—part of the time, at least. However, a great deal of learning that seems to occur under reward-and-punishment conditions is what might be termed “superficial conformity,” rather than real learning. When more permanent forms

of learning do occur, they often take place in spite of the method used, rather than because of it.

Each teacher who is attracted to the idea that learning can be manipulated through application of rewards or punishment needs to ask himself if there are not more effective ways of teaching. One of the purposes of educational psychology is to lead teachers beyond the oversimplified ideas about learning that are based on popular belief and are part of everybody's cultural inheritance into ideas that are based on scientific investigation.

The Belief That Learning Is Primarily a Process of Accumulating Knowledge. This concept often appears in the form of the popular idea that "the mind is a storehouse for facts." Teaching is thus a process of filling the "storehouse" with facts, and learning is the process of acquiring or absorbing facts. The more facts, the more learning. People who have this concept about teaching and learning are likely to place great stress on memorization, because the best way to learn facts, presumably, is to memorize them. Another popular formulation of this belief is that of referring to pupils as "empty pitchers waiting to be filled with knowledge." Learning is thus seen largely as a passive process: it is the learner's task to be receptive, and it is the teacher's task to see that the learner gets filled with learning. It was this concept of learning that George A. Stouffer, Jr. (1952), had in mind when, in discussing the contributions teachers could make toward the mental hygiene of their students, he raised the question of whether we think of a teacher's job as that of a social engineer who works with a child in his social and psychological environment or that of a service station attendant who is supposed to fill a child's mind with facts.

Although this "additive theory of learning" has deep cultural roots and is popular with traditionalists in civilized and primitive cultures throughout the world, it is even more fallacious than the idea that learning results directly from the application of reward or punishment. It is true that people learn facts and information, but they do so by fitting them into their previous experience. In other words, facts and information are learned *in relation* to something—other facts, skills, needs, concepts—something that is already a part of the life and experience of the learner. Unless what we learn becomes a necessary or useful part of our functioning as individuals, we quickly forget it. We may remember an isolated bit of information for a short time in order to pass a test and thus escape the punishment of a failing grade or avoid disappointing a teacher we like and respect, but once the grade has been assigned and the teacher pleased, the useless material passes into the limbo of forgetfulness.

In partial defense of this theory, it is true that educated people generally

know more facts than are known by people of less education. But this does not mean that education is a process of amassing facts. Success in education involves the development of broader concepts and frames of reference which, in turn, make it possible to learn broader and richer varieties of facts and information. These concepts and frames of reference help the individual to see how bits of information are related. Seeing interrelationships not only makes information more meaningful but more useful as well.

Earl C. Kelley (1954), an educational philosopher who has been outspoken in his criticism of misconceptions in everyday educational practice, has this to say about the belief that education consists of the amassing of facts:

Teachers and parents generally consider knowledge to be something which has existed in its own right for a long time, and that the learner needs only to reach out and acquire it. If all of a certain class reach out and acquire the same knowledge, then they will all know the same things. This notion has of course governed our ways of operation, our school buildings, our textbooks, and, more important, our attitudes toward our children. Since knowledge is assumed to exist in its own right before learning begins, anybody who is willing can reach out and acquire it. Those who do not do so are therefore perverse. Since perverseness of the learner is all that stands between us and success, we seek to coerce the learner. A whole pattern of authoritarian coercion is set up by this line of reasoning.

Since we now know that children cannot learn that for which they lack experience and purpose (or, if you like, readiness), some of them simply cannot learn some of the items we set out for them. Perverseness has nothing to do with it, although the child, when put in a position of being required to do that which he cannot, may look and act as though he is perverse.

The Belief That Things Properly Taught Are Retained Indefinitely. This is more an implicit theory than a belief, because most people would agree that some amount of forgetting is normal, no matter how good the teaching has been. Nevertheless, our attitudes and behavior toward learners and learning continually reveal our implicit and naïve faith in the long-range retention or the "permanence" of learning. We are, for example, surprised when a student has forgotten something we taught him last week or last month, and when he shows up in a college history class and confesses that he does not know the causes of the War of 1812, we say: "He obviously didn't learn (or wasn't taught) American history in high school," thus overlooking the possibility that he did learn but has forgotten.

Another situation that evokes this naïve theory is that of the student who enrolls in high school English and does not seem to know the most rudimentary rules of grammar and punctuation. The teacher throws up his hands and asks: "Didn't they teach you *anything* in grade school?" Sometimes he

may even ask the student if he had ever studied the parts of speech and the use of the comma. The student invariably looks blank and says that his teachers never taught him those things. Very likely, of course, they *were* taught, but he has forgotten. As far as he is presently concerned, it is as though he had never heard of them. And so the high school teacher shrugs his shoulders resignedly and starts a review of basic principles of grammar. When the same student goes on to college or goes out into the world to get a job, he encounters an instructor or an employer who asks the same questions: "Why, don't you know the basic fundamentals of grammar? Didn't they teach you anything in high school?" And so a review of basic principles is undertaken once more, this time as preparation for a college course or for certain job operations.

What has happened, of course, is that the student has learned the basic principles and the rules of grammar not once but several times. He has also forgotten them several times. He learned them to pass tests or to satisfy teachers, but he never learned them for purposes of his own. Once the need to remember them had passed, it was just as though he had never learned them at all.

There is nothing abnormal or unusual about the forgetting that takes place after formal classroom learning. A number of studies show that the amount of information retained by students several months after the end of a course is disappointingly small. For example, a study of the retention of American history revealed that after a lapse of eighteen months junior high students had forgotten one third of the facts that they had learned (Brooks and Bassett, 1928). Another survey showed that students had forgotten two thirds of the algebra that they had known a year earlier (Layton, 1932). A study by Glenn W. Durflinger (1956) of sophomores and juniors at the University of California at Santa Barbara showed that although students retained reading skills very well, most of them were unable to function adequately in mathematics, and a larger percentage were unable to recognize parts of speech. Some of the Durflinger's results are reported in Figure 7-1.

One explanation of the results of such studies is obvious. The average student has little occasion to recall historical facts or to practice mathematical skills. This does not account for the high error rate in English grammar, because students engage in a great deal of writing. The explanation here seems to be that one can write without recourse to the rules of formal grammar. In fact, a number of studies that go back to the beginning of the present century show that there is little relationship between knowledge of grammar and the ability to express oneself in writing (Hoyt, 1906; Asker, 1923; Miller,

1951). Hence it is hardly surprising that college students have forgotten much of the grammar they learned so painfully, not once, but several times over.

Even when a skill is practiced, it may deteriorate under certain conditions. Albert R. Kitzhaber (1963) conducted a survey of compositions and other papers written by Dartmouth College students and found that the number

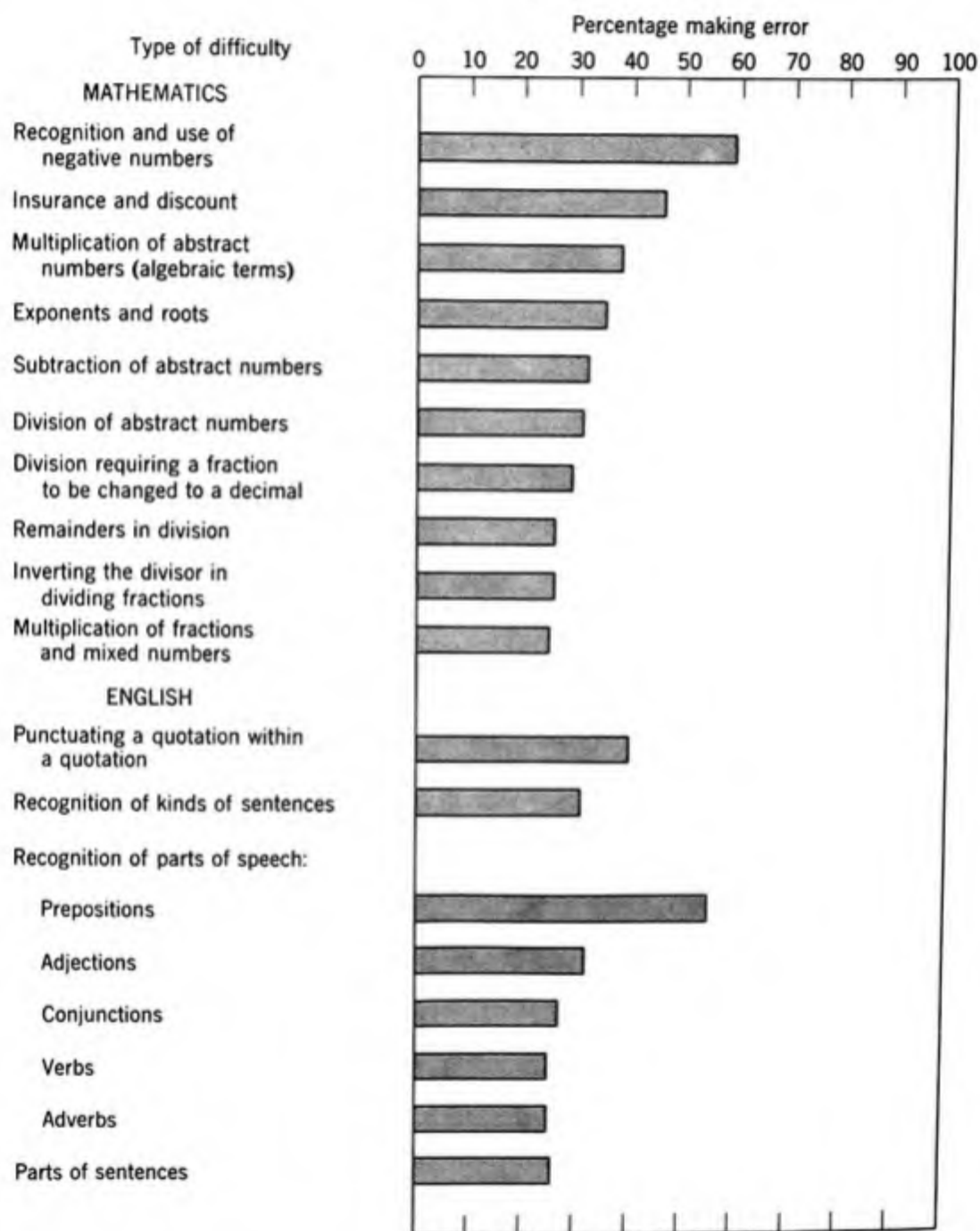


FIGURE 7-1. Percentages of University of California sophomores and juniors making errors in mathematics and in grammar. (Durflinger, 1956.)

TABLE 7-1. Rate of Errors per 1000 Words of Writing for Students at Dartmouth College (Kitzhaber, 1963)

Type of Error	Year in College			
	Freshman		Sophomore	Senior
	Beginning	End		
Grammar	1.17	0.36	0.79	1.56
Punctuation	4.79	3.47	5.01	7.99
Misspelling	3.62	2.16	3.21	4.22

of errors in their writing declined during the freshman year, when they were taking courses in English composition, but increased during subsequent years. As Table 7-1 shows, seniors were making more errors than entering freshmen! What is involved here is not merely ignorance of the rules of grammar, but an absence of supporting reinforcement from English teachers during the last three years of college. Because instructors in other fields apparently did not care whether students' papers were in good grammatical form, students naturally paid less and less attention to the formal aspects of their writing. What is needed to maintain a formerly attained level of adequacy is not, therefore, merely practice, but some kind of assurance that what was learned has functional value.

Perhaps this is the basis for learning that endures: it is perceived by the individual as somehow important to *him*. This may in some instances be more important than whether a skill is practiced or not. We have all had the experience of remembering information, concepts, and even skills that we acquired long ago and have had no practical reason to remember. But we remember them because somehow they seem important to us. Thus there does seem to be some validity in the theory that things properly learned are remembered, although this holds true only if "properly learned" means that they have acquired some kind of personal value for us.

The Idea That Learning Results from "Being Told." A group of parents had just seen a film on juvenile delinquency, the highlight of which was a scene in which a small gang of adolescents smashed the windows of a warehouse—"just for fun." As the light came on and the discussion period opened, the group sat quietly for a while, thinking about the picture. Then one parent spoke up and asked: "Why do kids do things like that anyway?"

Another answered: "My boy would never do a thing like that."

The first parent countered: "That's interesting; why not?"

"Why not? Simply because I have taken the time and the trouble to *tell him the difference between right and wrong.*"

The commonly held theory that people learn because someone *tells* them something is related, philosophically at least, to all three of the popular beliefs about learning we have discussed so far. It assumes that learning must start somewhere *outside* of the learner, that someone else must set the wheels in motion that finally result in learning. It also assumes that "what is learned" is the thing that is told, that this "thing" is somehow added to the store of knowledge already in the learner's head, just as you would add a brick to a pile of bricks already in a storeroom.

Like the other beliefs that we have described, this one is rich with tradition. It is basic to such educational practices as giving lectures and having students read textbooks. The idea is that learning is outside the student—in the lecture or in the textbook—and somehow he has to get it inside him. This is the theory held by Mrs. Del Carlo when she lectured the junior high English class on the subject of sportsmanship. However, she did not depend on this theory alone; note that she followed up her lecture with an assignment.

Sometimes we find evidence that students have gained much from hearing a lecture or reading a book, and this discovery appears to confirm this theory. However, such successes do not come merely because of what was said in the lecture or printed in the book. Any learning that occurs will depend on a variety of factors: the interest of the student, the extent to which he sees himself involved in the subject at hand, the way in which the material is presented, the student's opportunities to discuss and think over what has been presented, and so forth.

Let us assume that the parent in the incident we presented above is correct when he says that his boy would not break windows in a warehouse. Very likely he *has* told his son the difference, or some of the differences, between right and wrong. But he really cannot say with any certainty that his son's good behavior was the result of being told this difference. It may have been due to other factors: examples set by parents, living in a law-abiding neighborhood, not going around with a group that would break windows, and so forth. In other words, even if his parent had *not* told his son the difference between right and wrong, these other influences would have been sufficient to keep him from breaking windows. We know this partly because the behavior of adolescent boys is likely to be influenced more strongly by what their friends do than what their parents say, but we also know that there is very little change in behavior when people are merely *told* something (Lewin, 1958).

Actually, *telling* is one of the more difficult means of conveying informa-

tion that is to be remembered. Clifford P. Froehlich and W. E. Moser (1954) were interested in finding out whether persons who had been counseled remembered the test scores that had been discussed with them. They found that counselees could remember the highest score but not the others. If students cannot remember anything as important to them personally as the scores they make on tests, how can we expect that they will remember information in which they are *less* involved?

The Idea That Learning Should Proceed Deductively. Basically this is the idea that students should understand the theory or what they are about to do before they actually try it. In other words, students should understand the principles of grammar before trying to speak a foreign language; they should know how to add, subtract, multiply, and divide before they handle money; they should practice making circles and rhythmical strokes before they attempt to write; and they should understand botany and soil chemistry before they



Sybil Shelton from Monkmeier

One of the commonest traditional and popular beliefs is that learning results from "being told."

attempt to grow vegetables or flowers. The argument that theory should come before practice sounds very logical; hence it is not surprising to find it used almost universally as a basis for curriculum design in schools and colleges. In reality, however, it works out better for learners to have some kind of direct or personal experience with at least some aspects of the subject at hand before theoretical considerations are taken up. In other words, theoretical principles have more meaning for people who have had to cope with some of the problems to which theories are supposed to apply. Explaining how yeast plants turn sugar into carbon dioxide which in turn makes bread rise makes more sense to someone who has seen or participated in the making of bread than it does to someone who has not. People who have had direct experience with certain processes or materials see theoretical principles quite differently than those who have not had such experiences. This is why students who sign up for teacher education are encouraged to participate in a variety of activities concerned with children: teaching Sunday school, camp counseling, recreation work, Scout leadership, and even baby-sitting. Without such direct and personal experiences, much of the potential value of discussions of principles and theory is lost on students. In recent years, some schools of education have even begun to experiment with plans to give students classroom teaching experience before bringing them into contact with the more theoretical aspects of professional training. Although it is too early to evaluate the effect of such attempts, it would appear that such moves have a sound psychological basis.

The idea that learning should take place deductively, from the general to the particular, is one that is part of our European cultural inheritance. In the older European tradition, scholars are men of ideas, not of action, and their particular contribution to education is that of providing the theories or generalizations that explain experience. Hence the teacher is traditionally a kind of "specialist in theory"—someone who stands apart from the experiences and daily events of the world. The American society, however, with its democratic tradition and demands for technological competence, has emphasized the practical aspects of education. Whereas in Europe a major purpose of education has been that of *qualifying* a person to fill a certain position in the social structure, American education has been more concerned with *developing competence*—vocational and civic competence, as well as competence in everyday living. For this reason, theory plays a secondary role in American life. American educators, however, have had to cope with the demands of a public concerned with competence in everyday life but at the same time have attempted to use an educational approach that was largely European, hence more concerned with theory and form than with practical outcomes. These differences

are schematically shown in Figure 7-2. The "ideal" educational program is portrayed as one which draws upon experience and relates it to theory, which is then applied to a reevaluation of experience. The older European approach, which is characteristic of traditional education, is that of applying theory to experience. This means that theory can be used to modify experience, but that experience can have no effect on theory. The "common-sense" approach favored by most Americans, on the other hand, has been only incidentally concerned with theory, which is modified in accord with experience.

The advantage of the "ideal" approach to learning is that both theory and practical experience are used to supplement each other. Not only is experience used to modify theory, but also generalizations about experience are formulated which can then be applied to other and similar situations and problems. Indeed, one of the contributions of theory is that it helps the learner perceive similarities in other situations and problems and serves as a starting point or guidepost. This ability to apply what has been learned in one situation to another situation is what is called "transfer of learning."

The ideas that are implicit in these three approaches were tested in an experiment conducted by Bert Y. Kersh (1958), who gave a series of tasks involving arithmetical and geometrical relationships to three groups of college students. One group was given some instructional aids to help them in solving the problems, but was given no other direction; a second group received no

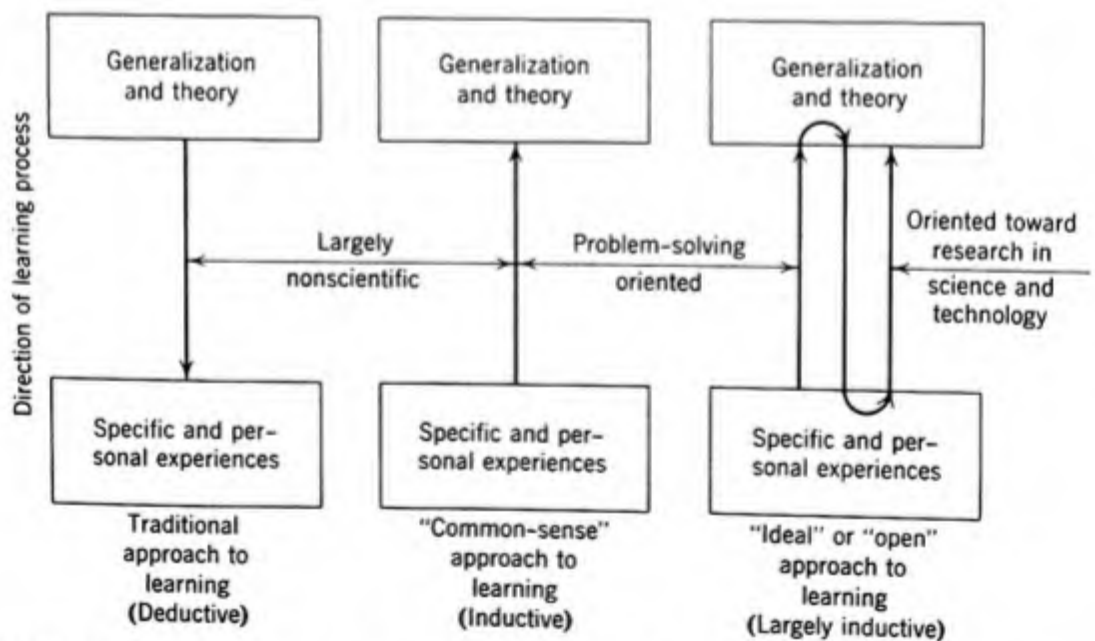


FIGURE 7-2. Differences among various ways of introducing theory and experience into the learning process and their effect on the direction of learning.

help in solving the problems; and a third group was given the rules that applied to the problems. When the students were tested four to six weeks later, those who had been given instructional aids made the best record, followed by those who had received no help, with those who had been given the rules making the poorest record. Students who had received no help had the highest motivation to continue learning on their own. One of the "no-help" students reported that he had become so intrigued by his success in discovering the rules that he told his friends about his experience and tried the problems out on them. Another "no-help" student went so far as to look up the appropriate algebraic rule in the library. On the other hand, one of the students in the "rule-given" group complained that he had forgotten the rules, because no one had told him to remember them. Kersh (1962) subsequently conducted another experiment, the results of which tended to confirm the findings of his earlier study, in that students who had been allowed to discover the principles applicable to a set of problems did better than a group who had been instructed in the use of the principles.

One of the implications of these studies is that the "inductive" method of proceeding from experience to theory seems to be more efficient when it comes to learning to solve problems. Kersh's research showed, furthermore, that transfer of learning, as measured by the ability to solve similar problems four to six weeks after the initial learning experience, was aided by inductive, but not by deductive methods. Another researcher, whose results are consistent with those of Kersh's work, found that the learning of simple physical skills, such as rolling a billiard ball or catching a ball on a tennis racket, was not aided by a study of the physical principles involved (Colville, 1957).

The Idea That Learning Transfers Automatically. Perhaps the most basic idea in education is the expectation that what is learned in the classroom will "transfer" to activities and problems outside the classroom. Unless students are changed by their educational experiences in such a way that their behavior is more intelligent and more effective, when contrasted with that of individuals who have not had the benefits of education, then the vast amounts of time, energy, and money that we invest in education have been wasted. The ability to understand the words in the fifth reader is a useless skill if students cannot use it to read newspapers and traffic signs, and the study of civics is a waste of time if students are not helped to become more effective citizens thereby.

Somehow, our assumption that classroom learning *ought* to transfer to life outside becomes transmuted into the assumption that it happens automatically. Often it does not. Here is an example:

A visitor to the fourth grade asked the children: "What do you do when you walk down the hall and you see a piece of paper lying on the floor?"

The children all knew the answer: "You pick it up and put it in the wastebasket."

A few minutes later, the recess bell sounded and the children hurried out to play down the hall that led to the play yard. The hall had been littered (by the visitor) with pieces of paper. A wastebasket stood nearby. No child stopped to pick up the paper.

The chief danger in the theory that all classroom learning will automatically transfer itself to everyday life lies in the false sense of security it gives us. As long as we can believe in automatic transfer, we do not feel the need to examine our course content and methods critically. Thus we keep courses in the curriculum that have long outlived their usefulness and teach otherwise valuable courses in such a way that whatever is gained in the way of learning is forgotten a few weeks or months after the final examination. The conventional approach to high school mathematics is a good example. Although algebra and geometry can be related to events in the life of every student, they are usually taught as highly abstract, esoteric areas of knowledge. Teachers typically remind students at every turn how useful these two branches of mathematics are, but seldom make any attempt to demonstrate their usefulness.

The teaching of mathematics is commonly defended on the grounds that it "teaches students how to think." In other words, it is proposed that the logical processes learned in mathematics will be helpful in dealing with such problems as deciding which occupation we should enter, how to live within our income, and which political candidate deserves our vote. The point is that both the problems we encounter in mathematics and those we encounter in everyday life call for logical analysis, and the logical analysis learned in mathematics, should presumably be applicable to situations and problems encountered outside the classroom.

Such transfer *can* occur when the new situation resembles the learning situation. The missing link in this process is the student and his perceptions. The question is: Does he *see* the problems of geometry and political choice as having some points of similarity? Or, rather, does he see that the kind of logical analysis learned in geometry is useful in dealing with other problems of life?

Usually students do not develop this kind of perception, hence do not make this transition, partly because teachers are unaware that students need help in seeing relationships of this sort; partly because they are concerned with other matters, such as getting control of the class and seeing that students understand what is being taught; partly because of the natural resistance of

students to a learning situation in which they do not feel emotionally involved; and partly because some of the transfer of learning we expect is rather farfetched. Perhaps there is actually very little of what can be learned in geometry that can be applied to a situation involving the selection of a political candidate. However, human beings are very ingenious. If they are really involved and interested in a subject or a problem, they demonstrate a faculty of being able to pick up the most obscure clues in the most unlikely places and use them to advantage. It is quite likely that there are people who have been able to use the kind of logic that they have learned in geometry and can apply it to everyday problems successfully. But in view of the way in which geometry is usually taught and is usually learned by students, such instances must be rather rare.

The Belief That Learning Should Be Painful. Most teachers today consider the outcomes of education to be more important than the educational process itself. We insist, for instance, that the study of geography is in itself useless unless it leads to a better understanding of the world. However, there is an idea that was popular a generation ago, is still popular in Europe, and even finds considerable acceptance in America today: the idea that education is or should be some kind of a mental toughening process that has a value in and of itself. The assumption is that the mind is a kind of muscle that can be strengthened by vigorous exercise. People who hold this theory believe that the more difficult, frustrating, and unpleasant the subject, the greater its value to students.

Educators and psychologists have so far been unable to find any sound scientific evidence for this theory. E. L. Thorndike (1924) found, over a generation ago, that high school students who took mathematics *did* make slightly superior gains in reasoning ability, when their performance was contrasted with students who had taken dramatics, biology, and home economics, but that this slight difference could be explained by the fact that the students who enrolled in mathematics courses had higher IQs to begin with.

Like the other popular and traditional theories of learning, the idea that learning activities must be tedious or uninteresting to have any value has a very strong hold on people's minds. Joseph Mayer Rice (1897) encountered much opposition at the end of the nineteenth century when he conducted research into the relationship between the amount of time spent in spelling drill and competence in spelling. When he reported that the children who spent half an hour a day in spelling drill could spell no better than those who spent only ten minutes a day at this task, the educators and laymen of that day felt he had missed the main point: the chief purpose of spelling drill was to *discipline the mind*, not to teach spelling!

Today we are less likely to put much faith in this stress-and-strain theory of education. But sometimes we are disturbed when it appears that children are having too much fun in school. After all, education is supposed to be a rather serious business, and it is hard for us to accept the idea that learning might be enjoyable. This is one of the reasons why schools are frequently attacked for putting "frills" like folk dancing, dramatics, and life-adjustment education into the curriculum. We wonder whether we are not being "too easy" with students these days, and whether they will learn "the hard facts of life," if learning becomes too pleasant.

These feelings are aggravated whenever we hear reports that the students in our community are deficient in arithmetic or science as compared with the students in an adjoining community or with Russian students. At such times, we set our jaw and say: "Students are just not having to work hard enough; what they need is more discipline, more homework, and, above all, more drill in the fundamentals." Part of this feeling comes from wanting to punish our children for having let us down, but part of it comes from the feeling that learning should be, after all, a kind of drudgery.

Although most teachers no longer believe that children should study solely for the purpose of "mental discipline," they still tend to associate success in learning with the amount of time spent in studying a subject, even though researchers following in Rice's footsteps have been unable to find any substantial evidence to support the idea. For instance, a study of academic achievement among freshmen at the University of Wisconsin found no relationship between academic grades and the number of hours spent in study (McQuary, 1953).

The Belief That Learning Must Be Pleasant. One of the intriguing facets of the study of human behavior is its apparent inconsistency. We seem to have an amazing ability to develop beliefs and take stands that are completely contradictory—even on the same subject. The same person who has criticized the local school administration for permitting a half hour a week of folk dancing will, when meeting a child at the home of a friend, go through the same ritual of questioning that many of us employ in similar situations. The sequence of questions goes something like this: "What's your name? How old are you? What grade in school are you in? What school do you go to? *Do you like school?*"

In America it is very important that children *like* school. In other countries it is much less important—it is even irrelevant. An American teacher reported, after a visit to France, that when he asked French school children whether they liked school, they were surprised at the question. Why should anyone be expected to like school? One went to school because all children go to

Educational Psychology in the Classroom

school; one accepted this as a matter of course. And why should anyone, especially an adult, be concerned whether school was liked?

The people of America are proud of their educational system; even when they criticize it, they are proud of it. They are proud of it because they know that they have created it themselves. They see it as an institution that makes it possible for people to better themselves. They see education as providing the spark and the power that has made America a great nation. But most important is the feeling that the public school system is something that is created and directed by the people—it is *their* system. And it is something they have done for their children, not for themselves.

Because we feel so personally involved in our schools and because we have put so much time, money, and effort into them, we feel that children should *like* the schools we have provided for them, just as we want to have children appreciate and enjoy any other generous thing we might do for them. Yet we are not sure whether we have done as well as we could have done. We are not sure whether the system will do all that we hope. Hence we ask children for reassurance: "Do you like school?"

Very likely we are also asking whether they *appreciate* school, whether they see in school the great opportunity and challenge that we see. And very likely, too, we hope that children will like school, because school is, or should be, a good thing.

The idea that learning should be fun is in part related to the assumption that educational experiences are good experiences, but it is also a reaction against the older idea that learning should be painful. The idea that learning can be fun is one that gets much of its support from teachers who like to see children happy or who themselves enjoy learning and therefore want to share their pleasure with others. No modern educator would have any quarrel with these points of view; indeed, we wish that all teachers enjoyed seeing children happy and were enthusiastic about learning. Two of the most basic qualities in good teachers are their interest in children and their enthusiasm for learning.

The idea that learning should be an enjoyable experience has considerable support in research. The study by Hurlock (1925) referred to earlier in the chapter, for instance, showed that generally better results were obtained by positive rather than negative comment, and there is no question but that the *results* of learning must be satisfying, if morale is to be maintained and learning efforts are to be continued throughout the entire school career of the student. The question is, however, whether all aspects of the learning process should be necessarily pleasurable and satisfying. Should a student, for example, find the experience of being unable to find a solution to a problem a satisfying one?

The point is that the idea that "learning should be fun" can be carried to the point where it may actually interfere with intellectual growth. Some teachers, like some parents, can overprotect children by attempting to shield them from ideas and experiences that might be disturbing. Sometimes they plan their classwork in such a way that no child will have the experience of failure. To be sure, there is much too much emphasis on failure in education today, with the result that children become discouraged too quickly, but the antidote is not that of eliminating failure altogether. And we must distinguish between teacher-determined failure (any grade less than "perfect," for example), which often leads to cut-throat academic competition and public humiliation, and the failure that occurs on a small scale, privately as, for instance, when a child discovers that he is using the wrong method to solve a problem or encounters a word that he does not understand. Life for both children and adults contains countless incidents of failure, and we must all learn how to cope with them. As Alma Bingham (1958) says:

We must allow children failures. We quell many problem solving opportunities and give them limited experience by making sure they won't fail.

Keeping a child from failure is the result of mistaken ideas about the nature of the learning process. Every learner needs a chance to explore the problems that confront him, to test their boundaries or limits, and to try out various solutions. He cannot do this if he is never permitted to fail. One of the chief reasons we have difficulty in letting children fail is that our culture makes failure a kind of disgrace, and the very thought of it arouses our anxieties.

The initial stages of learning, too, are normally characterized by some degree of anxiety. The puzzlement and tension we experience when we are confronted by a problem that calls for the learning of a new skill or new information have the qualities of mild anxiety. Indeed, all really important learning is accompanied, or at least preceded, by some discomfort or anxiety. When learning really takes place, it means that there has been some change in the learner. We seldom welcome change. All that is childish and immature within us struggles against the necessity for change. It is much more comfortable to leave things the way they are and not to have to change. But when our environment is making demands on us, our old ways of behavior are no longer appropriate and we are made uncomfortable by the realization that we are out of step, that we cannot cope with the world as successfully as we would like, that we need to make some adjustment. In effect, we realize that we are unable to meet our basic needs successfully, and we become anxious for fear that we might never be able to meet them. Perhaps we discover that

we are nonreaders in a world of readers, or perhaps we realize that we can never cope with the world as skillfully as adults unless we learn to read. The normal anxiety that results from this realization acts as a spur that helps to urge children into the process of learning to read. Once they are successfully caught up in the process, learning becomes a satisfying experience, in the sense that they get the feeling of accomplishing something, of learning how to cope with the world and do what other people can do.

After reviewing research in six areas of mental development, Ralph W. Tyler (1948) came to the conclusion that mental development is actually facilitated by situations containing some element of conflict or frustration: "In order that effective integration may take place in the child's mental development, conflicting drives, impulses, external demands, and ideas must be balanced, not eliminated."

The course of true learning—like that of true love—never does run smoothly. Even the successful reader experiences occasional frustrations in his attempts to extract meaning from the printed line. If he has a backlog of successes, he can meet each new frustration with confidence. He will be irritated when he encounters words he cannot understand, but he learns to persist and not to surrender to his irritation.

The teacher who bases his approach to learning entirely on the reward and punishment principle knows that children learn in response to pressures, but he does not realize that these pressures should be internal—that is, they should be the result of the child's attempt to meet his own needs rather than an adult's idea of what is best for children. On the other hand, the teacher who insists that learning must be a completely pleasurable experience may be so successful at shielding children from uncomfortable realities like frustration and failure that little learning actually occurs. The first kind of teacher renders learning activities ineffective because he makes learning too painful or distasteful, whereas the second renders them ineffective by attempting to keep them entirely on a pleasurable plane.

The Prevalence of Traditional Beliefs about Learning. Probably most people are not aware that their attitudes and behavior toward education are governed by the kinds of implicit theories we have described, or, for that matter, that they have any theories about learning at all. However, the way in which people react when educational matters come up for discussion and decision provides unmistakable clues that these beliefs are very widely held.

Nor are educators exempt. The ideas covered in this chapter are very much a part of our tradition and cultural pattern, and, even if we are professional educators who should know better, we continually find ourselves making decisions that are rather obviously based on the ideas that children have to be

rewarded or punished in order to get them to learn, that teaching is telling, and that difficult subjects discipline the mind. An example of this tendency is provided by an incident that occurred in a large city school system. A survey of basic skills showed the children to be slightly below national norms in arithmetic, although above the norms in other subjects.

The immediate reaction of many of the teachers and principals was to recommend that more time be spent on arithmetic. Such a reaction is of course very understandable; it is an idea that would occur to almost anyone who has been given the task of trying to figure out what to do when children are below par in arithmetic. However, educational research has showed us that answers to learning problems are seldom as simple as this. You just cannot improve learning in a certain subject merely by increasing the amount of time children spend studying it. Modern educators know this and have known it for some decades: it was one of the findings of J. M. Rice in his studies of spelling referred to a few pages back. But the belief that the cure for educational deficiencies is largely one of spending more time on the troublesome subject is rather firmly fixed in our cultural tradition, hence in our personal philosophies, and we have not been able to eradicate it by taking courses in education and finding out that learning does not occur this way. As we said a little earlier, learning produces changes in us, and we tend to resist being changed. This is true whether we are talking about learning in the fourth grade or learning how to teach.

Because these ideas about learning are so much a part of our outlook on life, it is difficult for us to accept evidence that they do not work. Hence when education based on these ideas fails to promote learning in students, it seldom if ever occurs to us to be critical of the theory that caused the trouble, because we accept its "truth" as a matter of course. Instead, we criticize the students: they don't study enough, their parents don't set good examples and won't make them study hard enough. If we are parents, we find fault with the school. Teachers blame parents; parents blame teachers.

Further evidence of the importance placed by many people on these traditional and popular beliefs about learning is provided by the fears and anxieties that are aroused when educators try to develop curricula or use methodology based on newer ideas that have been found to be more effective. Traditional ideas have become so much a part of the thinking and behaving patterns of most people to the extent that any attempt to change educational methods for something better and more efficient is seen by them as a personal affront, as an attempt to attack the values they hold dear. Because the possibility of change, even for the better, arouses so much anxiety in people, educational reforms come slowly, if at all. Indeed, there is some evidence that the past

decade or so has seen a return to the older, prescientific or nonscientific concepts of learning and teaching.

Earl C. Kelley (1954) has the following to say about the conflict between scientific approaches to problems of education and the traditional theories of learning we have been discussing:

With regard to the use of known facts, we are about where the medical profession was one hundred years ago. We would not think much of a doctor who gave us medicine simply because it had always been used. We *expect* him to be scientifically up-to-date. We demand the newest antibiotic. When George Washington became ill with pneumonia the doctors, I am told, bled him, because bleeding was held to be good for the sick. What he needed was more blood instead of less. So he died. If the doctors had not bled him, however, they might have been indicted for criminal negligence. Some of us who are teachers are "bleeding" our children on public demand.

The difference between the attitude of the public toward doctors and teachers shows that it matters a great deal which part of the [person] one ministers to. If you work on the physical, visible part of man you are expected to use the latest scientific data. If you minister to the psychological, invisible, attitudinal, then superstition, tradition, and emotion are good enough.

SUMMARY

Each of us subscribes to several theories or ideas about learning, although we are not generally aware of doing so. The approaches we use in learning or in directing the learning behavior of others reveal the kind of learning principles we believe in. Most of these learning principles are part of our cultural inheritance, and may seem like "common sense" to us, but they may also interfere with the effectiveness of our teaching or learning.

One of the commonest beliefs is the idea that learning occurs because the learner has been rewarded or punished. There is some scientific basis for this theory, but teachers forget that what may be a reward or a punishment in their eyes may not be perceived by a student in the same way. Furthermore, some students respond more favorably to rewards, while others respond more favorably to punishment, and there is always the danger that we may be reinforcing the wrong behavior through our uncritical application of reward and punishment.

Another popular idea about learning holds that learning is a process of accumulating facts and information. This theory overlooks the fact that everything that is learned is learned in relation to the student's previous experience and that knowledge does not and cannot exist as something separate and outside the experience of the student.

The idea that a thing once learned properly is learned for all time is another theory that has many adherents. It is true that we are more likely to retain a skill or a concept that has value, purpose, and interest for us, but something that is of little value or purpose is quickly and easily forgotten, no matter how thoroughly it has been memorized. The same criticism applies to the belief that learning results from "being told."

The idea that learning should proceed deductively—from the application of theory to practice—is one that comes to us from our European origins. Opposed to it is the American idea that theory should grow out of practical experience. Perhaps an even more useful idea is the thought that experience should precede the development of theory, but that both theory and practice should be used to improve each other. Research with these concepts shows that learning is more effective if the learner is able to derive his own theories.

The idea that learning should be a toughening process—a kind of mental discipline—has fewer adherents than it formerly did, but it still appears in modified form. Sometimes we get disturbed when students appear to be enjoying themselves in the classroom, and we get the feeling that learning is serious business—it should not be "fun."

The mirror image of this theory is the idea that learning *should* be fun. It does not have the traditional background of the other theories, but it may interfere with effective teaching if it is interpreted to mean that learning must *always* be fun or that students should be protected against the frustration, failure, and normal anxiety that are a necessary part of most learning situations.

Although traditional beliefs have little scientific basis, they are difficult to unlearn. Consequently teachers and administrators tend to use them as the basis for educational procedure, even though the fallacies of these beliefs have been pointed out to them in the course of their professional training. Traditional methods and points of view are attractive because they are psychologically comforting and reassuring, despite their ineffectiveness.

SUGGESTED PROBLEMS

1. A "true" answer to each of the true-false questions listed near the beginning of this chapter is of course consistent with traditional and popular beliefs about education and inconsistent with psychological and educational research findings. Try the same questions out on some of your acquaintances and see how much acceptance these theories have with the general public. Are they willing to agree that these theories are not very valid or effective? Comment on the degree of resistance you encounter in discussing these issues with them.

Educational Psychology in the Classroom

2. Researchers have shown again and again that the study of formal grammar is of little value when it comes to improving students' ability to express themselves in writing. Why do you suppose that English teachers continue to stress grammar? What methods of teaching English composition do you think would be more effective?

3. Drawing on your own experience, give some examples of a teacher whose methods indicated a belief that learning should be painful and some of a teacher whose methods indicated a belief that learning should be fun.

4. Select some institution outside the school that is engaged in the process of attempting to educate, such as the Army, mental hospitals, prisons, or business and industry. In what way are their methods characterized by popular theories of learning?

5. In this chapter we have given some examples of transfer of learning that do not succeed. Give some examples of classroom learning in which transfer is successful, and, using the psychological principles that have been presented so far in this book, explain why they succeed.

SUGGESTED READINGS

- Bayles, E. E., *Democratic educational theory*. New York: Harper, 1960. Criticizes orthodox approaches to education.
- Benjamin, H., *The sabre-tooth curriculum*. New York: McGraw-Hill, 1939. An entertaining and penetrating satire on the foibles of traditional curricula and methodology.
- Brameld, T., *Patterns of educational philosophy*. Yonker-on-Hudson: World Book, 1950. See Part 2, "Three educational philosophies in their cultural settings."
- Canton, N., *The teaching-learning process*. New York: Dryden, 1953. See Part 1, "The current practice."
- Dewey, J., *Education today*. New York: Putnam, 1940. See Chapter 2, "The primary-education fetish," and Chapter 3, "The people and the schools."
- Henry, N. B., ed., *Philosophies of education*, 54th Yearbook, National Society for the Study of Education. Chicago: University of Chicago Press, 1955.
- Highet, G., *The art of teaching*. New York: Knopf, 1950. An eloquent statement of the best that is in traditional education.
- Kelley, E. C., *Education for what is real*. New York: Harper, 1947. A stimulating discussion of education and reality from the standpoint of perceptual processes.
- Lindgren, H. C., *Mental health in education*. New York: Holt, 1954. See Chapter 11, "Three approaches to education."
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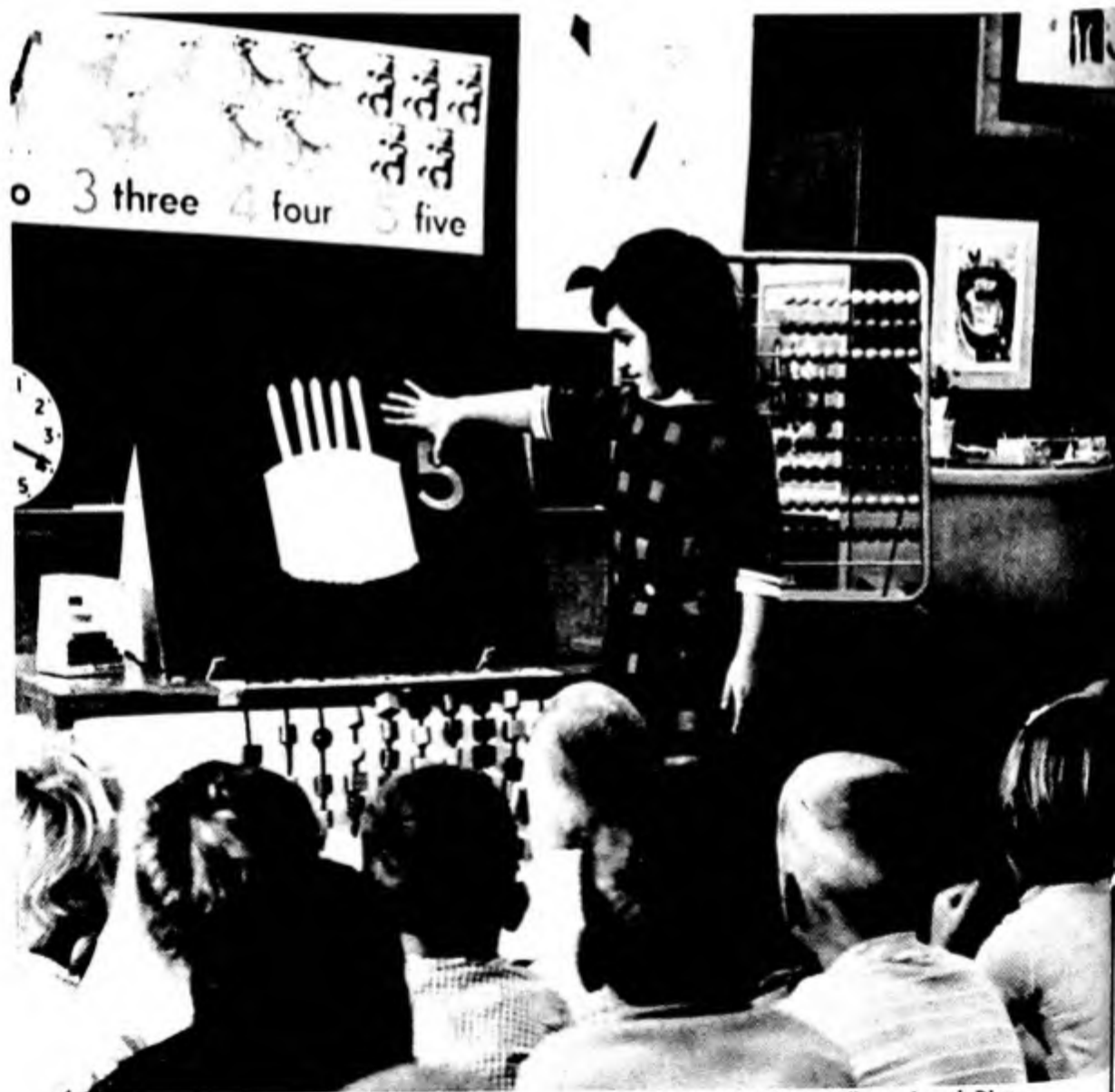
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8 Psychological Conceptions of the Learning Process



San Francisco State College—Joseph Diaz

Why We Need to Develop Theoretical Concepts. One of the essential characteristics of man is his need to make sense out of the world around him. If he cannot fit his impressions of the universe into some sense-making framework, he becomes fearful and anxious. Very likely this need is related to his basic need to avoid danger and make his environment a safe place in which to live. Primitive man attributed the destruction of storms to the anger of the gods. By comparing the violence of storms to the violence of anger and by identifying or designating some superhuman source, he felt somewhat reassured. He might still be afraid of storms, but he felt as though he understood them better. Today we know that storms are caused by differences in the pressure, temperature, and humidity of air masses, and this knowledge is even more reassuring, because we can now make reasonably accurate predictions of when storms will arrive, how intense they will be, and how long they will last. We are still afraid of them, but because we understand them better and can take precautions to defend ourselves against them, we feel more secure and less anxious.

Scientific research is a refined and highly developed outgrowth of man's need to explain and understand the world around him. His earliest attempts to understand his environment were based largely on surface phenomena—the way things appeared to him. Hence he explained the relationship of the earth and the sun by saying that the earth was a flat plain, warmed and lighted by a sun that rose in the east and set in the west. He ignored certain facts that did not fit into that theory, such as his inability to see beyond the horizon, because his theory explained as much as he wanted to know and he was afraid that if anyone questioned it and proved it wrong, he might be left without any theory at all. So when skeptical people attempted to probe into the facts that did not fit the commonly accepted theories of the

day, he killed them or tortured them in an attempt to force them to say that the facts did not contradict the prevailing beliefs after all.

The Development of Theoretical Concepts Based on Science. During the last few hundred years, however, we have become somewhat more tolerant of skeptical people who want to investigate facts that do not fit commonly accepted beliefs. We have now reached a point in the development of the human race where we allow a great deal of freedom to people who want to investigate the physical and natural world. For one thing, we now realize that certain practical advantages, such as the development of modern technology, have resulted from such research. We also permit people—the behavioral scientists—to investigate human behavior, but because such research strikes “closer to home” and raises questions about traditional theories and our most cherished prejudices, many of us have reservations about the freedom that we should allow for this kind of research and the extent to which we should accept its findings. Indeed, many of the findings of behavioral scientists are contrary to our ideas of “common sense.” What we are saying, of course, is that the physical or natural scientist enjoys much more freedom, acceptance, and support than does the behavioral scientist, particularly the psychologist or the educational research worker. In spite of this undercurrent resistance, the behavioral scientist has made much progress in recent years both in conducting research and in breaking down the prejudice and suspicion arrayed against him. Getting people to *apply* the results of this research is much more of a problem, however.

Like their fellow scientists in the natural and physical fields, psychologists have had to learn to be skeptical. They have had to learn to be suspicious of simple, obvious explanations of human behavior, just as earth scientists have had to learn to be suspicious of such obvious and deceptively simple theories as the idea that the world is flat. One of the discoveries that psychologists are continually making is the frustrating but stubborn fact that there are seldom, if ever, any simple explanations for human behavior. It is always more complex than it seems at first glance.

Take learning, for instance. Take the question: “Why do children learn to read?” The simple and obvious answer is that they learn to read because someone teaches them to read. But when we study the question, we find that the answer is not so simple and obvious. There are other causal factors involved. Children do not learn merely because they are taught. They must *want* to learn. Therefore, another reason why children learn to read is that they *want* to read. But even this additional explanation does not explain why some first-graders who want to read do not learn to do so, and it does not explain why three-year-old children generally cannot be taught to read, even

though they might want to. Nor does it explain why it is easier to teach children to read in schools situated in middle-class, Midwestern suburbia than in the rural South. When we probe into these differences and inconsistencies, we find more and more underlying complexities. This is one of the reasons why we are so often less than tolerant of the findings and the theories of psychologists. When we are faced with a difficult problem like that of trying to teach a fifth-grade nonreader to read, we would like to have a simple explanation of why he cannot read, so that we could apply a simple solution to the problem. However, we are disappointed because the psychologist's report makes the problem seem even more complex than it appeared before. But what the psychologist is telling us, among other things, is that there are no simple explanations to human problems and that there probably are no simple solutions. To be sure, we *do* occasionally resolve a difficult problem through some simple act or gesture, but the reasons why we succeed are as complex as those underlying the problems we solve.

Testing Popular Theories of Learning. Skepticism leads psychologists to test out what seem to be the most self-evident truths. Hence they are often charged with spending a lot of valuable time proving the obvious. It is true that psychologists very often do find support for conclusions that everyone else has taken for granted, but very often they do not. In the last chapter we referred to the traditional theory that material learned in one situation automatically transfers itself to other situations. An example of this theory is the common belief that taking courses in Latin improves one's ability to read and write English. However, psychologists felt that this belief, like other beliefs about learning, should be investigated. What they found was that studying Latin has no discernible effect on competence in English (Thorn-dike, 1923; Woodring, 1925). But this does not prove that the study of Latin has no value as regards the study of English. It proves only that Latin *as usually taught* does not help the study of English *as usually taught*. It is quite possible that both Latin and English could be taught differently to the end that students could transfer learning from one subject to the other.

One of the commonest fallacies underlying so much traditional and popular learning theory is the assumption that when two things occur together, one causes the other. There are many instances of this kind of fallacious thinking in everyday life. One of the most recent is the common belief that children learn to be delinquent by reading comic books. This belief gains credence from the recent increase both in juvenile delinquency and in the sale and consumption of comic books. It is only natural that our distaste for the kind of reading material to be found in comic books would lead us to assume a cause-and-effect relationship. However, this assumed relationship

has not stood up under investigation. Children who read many comic books are no more likely to be delinquent than those who read few or none (Lewin, 1953). W. Paul Blakely (1958) found no relationship among seventh-graders between the amount or type of comic books read and problem behavior or school progress. As a matter of fact, children who read more comic books also read more library books. An incidental finding that is of general interest was the fact that parents interviewed in the study were not very accurate, when it came to reporting the amount of comic books or library books their children were reading.

An examination of popular beliefs about learning, such as we undertook in the preceding chapter, shows that there is a pressing need for us as teachers to understand the learning process, not only because it is important for us to possess expert knowledge of this key process, but also because popular beliefs actually lead us to misjudge and misinterpret what goes on in our classrooms. Learning is a relatively simple process when viewed through the lens of traditional and popular theories about learning, but this very simplicity is deceptive. What we need are facts and theories about learning that have more of a scientific basis, help us view learning more realistically, explain why teachers succeed or fail, and above all will enable us to teach more effectively.

Requirements of an Adequate Theory of Learning for Teachers. If a theory of learning is to aid us in becoming effective teachers, it must accomplish the following:

1. *It must help us understand all processes of human learning.* Many if not most of the changes in human behavior that we ordinarily encounter or are aware of are the result of learning. This holds true whether the behavior occurs in the classroom or out of it. It also applies to the entire range of skills, concepts, attitudes, habits, and personality traits that may be acquired by the human organism. A good learning theory should help us understand how all these are acquired. One difficulty with traditional and prescientific theories about learning is that they are too limited and are concerned almost entirely with the kind of learning that results or is *supposed* to result from instruction. Furthermore, they ignore such phenomena as differences in learning rates, motivation, incidental learning, unlearning, and relearning.

2. *It must extend our understanding of the conditions or forces that stimulate, inhibit, or affect learning in any way.* Traditional and prescientific theories about learning are concerned, to be sure, with the effect that the teacher has on the learner, but they ignore or depreciate such important variables as the learner's attitudes toward himself, his view of the world and

life in general, his strategy in approaching problems, and the level of his anxiety. Behind these personal factors is a whole array of background factors, such as parental attitudes, social class, and emotional climate of the school and classroom, which are also ignored by traditional theorists.

3. *It must enable us to make reasonably accurate predictions about the outcomes of learning activity.* A learning theory is useful only to the extent that it enables us to make accurate predictions about learning. The difficulty with popular and traditional theories of learning is that they lead us to be too naïve in our predictions of success, thus overlooking factors that are likely to cause us to fail. A good learning theory would lead us to examine our assumptions, methods, and criteria a great deal more critically and thus enable us to plan learning situations intelligently.

4. *It must be a source of hypotheses, clues, and concepts that we can use to become more effective teachers.* Traditional and prescientific theories about learning provide nothing in the way of new ideas and suggestions for teachers who have failed to produce learning in their students. The teacher has little choice but to repeat the same process over and over again in the hope that the desired learning will eventually take place. If this fails, the teacher is then led to blame the students rather than the theory on which his teaching methods have been based. An adequate theory of learning, on the other hand, should be a dependable wellspring of ideas and insights that provide bases for a variety of approaches to the solution of the teaching-learning problem.

5. *It must be a source of hypotheses or informed hunches about learning that can be tested through classroom experimentation and research, thus extending our understanding of the teaching-learning process.* No profession can be considered to be effective if it stands still, if it fails to expand its understanding of the processes and materials with which it deals. The infinite number of variations and complexities of human behavior mean that our understanding of learning is never complete. Continued research makes our understanding of learning more effective, but it also reveals problem areas that call for further research and study. On the one hand, the realization that our understanding is always incomplete is baffling and frustrating, but on the other, the opportunity to grow in the profession and develop new insights can be stimulating and challenging. Classroom experimentation and other kinds of research offer the means whereby ideas about learning and new techniques can be tested as to their validity and practicality.

Assumptions Underlying an Adequate Theory of Learning. Any theory of learning must be based on some assumptions regarding human behavior. The theory that "being told" is learning, for example, assumes that learners

will be attentive, will understand and accept whatever is told them, will modify their behavior accordingly, and will apply the learning appropriately. These assumptions may be valid under certain limited conditions, but they certainly yield disappointing results when applied to the broader ranges of human behavior, even that range of behavior that occurs within the walls of a classroom and within the limits of a thirty-minute class period. Assumptions need to be broad and pervasive. The broader the range of human behavior a theory covers, the greater its validity. A learning theory that helps explain a broader range of behavior and that enables us to make more predictions, is better than a theory that explains a narrow range of behavior and permits only a few predictions.

Let us then consider three basic assumptions that have the advantages of being broad and at the same time consistent with scientific knowledge about human behavior.

1. *Man's attempts to become competent and effective are principally the result of learning.* Except for our basic physiological reflexes (breathing, di-



San Francisco State College—Joseph Diaz

The kinds of attitudes children develop toward books help determine the direction that learning will take throughout their lives.

gestion, elimination, and so forth), the totality of our behavior is a complex constellation of *learned* segments of behavior. Even the basic physiological reflexes can be modified by learning. We *learn* to be what we are and who we are.

2. *The learning process is initiated when the individual perceives events in his environment (or within himself) that are new and different from those previously experienced.* The learning process itself consists of attempts to cope with changes in our internal and external environment. These changes may consist of new forces or stimuli impinging upon the individual, or they may consist of changes in the way he *perceives* his environment or himself. His attempts to cope with these changes are what constitutes the learning process. He may cope with these changes by using behavioral sequences that have worked in the past, or he may try out new approaches. His attempts to cope with change may be successful or unsuccessful. If unsuccessful, he may learn to avoid such approaches. Or, having learned previously to expect the worst of himself, he may select some approach that is bound to fail, thus reinforcing his feelings of inferiority.

3. *Learning is a continuous, lifelong process.* The individual's external and internal environment is continually changing, and these changes stimulate learning. Man's drive to be competent and effective leads, under normal conditions, to an accumulation of greater effectiveness in dealing with his environment, but if he feels inadequate, or is troubled by a superabundance of anxiety or fear of anxiety, he may build defenses that keep him from perceiving the changes that are taking place within him and his external environment. Such defenses lead to the rigid patterning of behavior, the use of behavior inappropriate to the solving of problems, and other forms of immature, neurotic, or inadequate behavior. Under such conditions, the individual may learn self-deprecating attitudes or may learn behavior that causes him to ignore or misperceive his changing environment and thus avoid the problems that face him. A child who cannot cope with the teacher's expectation of a certain degree of competence in reading might find ways of denying that such competence actually is expected of him, might decide that he is incompetent or stupid, might distract the teacher through misbehavior, or might compensate for his inadequacies by attaining successes in other fields. Each of these is a *learned* pattern of behavior and is in turn likely to be based on the previous employment of such behavior patterns in stress situations.

Even though a behavior pattern is a familiar one that is being used in a new situation, learning takes place. The learner finds, for example, that the familiar behavior is appropriate or inappropriate. Learning includes such processes as unlearning, relearning, or confirming familiar patterns of be-

havior. It may take place on several levels simultaneously. The boy who learns how to use a lathe in shop not only learns a new skill, but he also learns something about the kind of person his teacher is, the teacher's attitude toward him, and his own ability to learn.

One fact that is implicit in these assumptions is that learning is not a process that is limited to the interaction between teacher and student and the specific matter with which they are mutually concerned. Nor is it limited to the classroom. Furthermore, it can be positive or negative: it may aid the intellectual or emotional growth of the individual, it may inhibit it, or it may cause him to regress to a less mature form of behavior. Admittedly, this concept makes learning a much more complex phenomenon than it is usually conceived, but at the same time, it is much more realistic. The observer who watches a heavy-handed, hostile teacher try to bludgeon a class into learning the multiplication of fractions, should realize that the children are not only failing to learn the techniques of this rather intricate process, but are also learning to be afraid of teachers and to be anxious about arithmetic.

Of course, we may as teachers focus our concern on a certain technique or constellation of facts that we want students to learn. Such a focusing is often a necessary part of classroom teaching. But in doing this, we should not lose sight of the fact that people learn as whole organisms, and not segmentally. Whatever a student learns is going to be related by him to his concept of himself (which is in itself a complex pattern of learned attitudes) and to other significant skills and attitudes he has learned. Even the physical aspect of the organism is involved in learning. An upset stomach can interfere with classroom learning, and difficulties that occur in the classroom can upset stomachs. Trying to hold the attention of children toward the end of a rainy day is difficult, because they have not had their usual opportunities to run around and engage in other forms of large-muscle activity. These are but two of the many ways in which intellectual, emotional, and physical aspects of the human organism interact. Intellectual, emotional, and physical behavior are merely different aspects of the same human organism.

Motivation. One of the shortcomings of traditional and popular theories about learning is their attempt to ignore motivation or to reduce it to rather narrow and stereotyped categories. The idea that students learn only because they are rewarded or punished is one example, and the idea that students learn because they are told is another. These ideas operate on the rather naïve assumption that student motivation is something that can be turned on whenever the teacher decides to teach.

The three basic assumptions that we have made about human behavior take the position that learning is a natural, normal process, and that it is in

the nature of being human to learn. The need to learn is obviously stronger at some times than at others. Walcott Beatty and Rodney Clark (1960) suggest that the individual is motivated to learn when he realizes that there is an imbalance or a discrepancy between what he is or can do and what he should be or should do. According to this formulation, the motivation to learn is based on the drive to become more adequate and thus to eliminate the discrepancies between the self that is perceived and the self as it should be.

As we pointed out in the chapters on growth and development, the child's encounters with his environment reinforce some kinds of attitudes and behaviors more than others. If a child's perceptions of himself as an achiever are reinforced, he is likely to develop a higher degree of need for achievement (*n Ach*) than a child who does not receive this type of reinforcement. The importance of this type of motivation is suggested by a study showing a significant correlation between measures of *n Ach* and academic success (Doty and Doty, 1964).

It is also useful for a teacher to have an understanding of the particular kinds of motivational currents that are likely to affect the behavior of students in the classroom. Miss Kanzler is obviously going to have some trouble teaching the third declension in Latin this week, because most of the boys in her class are involved in organizing a new secret fraternity. The fact that such fraternities are against the school rules only makes the project more exciting. Because of their involvement in this project, they are giving only superficial attention to their studies. In a week or two things will return to normal, and their academic performance will do likewise. Until then, Miss Kanzler's rather conventional and routine efforts to promote learning in Latin will have little success.

CONDITIONING OR REINFORCEMENT THEORIES

Classical Conditioning. Although the motivation to learn is universal, there are obvious differences in learning rates and in the kinds of performance displayed by learners. As we suggested in the preceding paragraphs, some of these differences are due to variations in the motivation of learners, but such variations obviously do not account for all the differences that occur. Some, probably the vast majority, are a function of the kinds of situations in which learners find themselves. These situations can be viewed as complex arrangements of stimuli that affect the learner and subsequent behavior in certain recognizable ways.

Since the early part of this century, psychologists have been investigating the interaction between living organisms and their environment in order to

find out just how learning occurs. As a result of much painstaking research, they have found that when a certain stimulus produces a certain response in an organism, and when a second and irrelevant stimulus is introduced more or less simultaneously with the first stimulus, the response in question can eventually be evoked by the second stimulus, without the aid or presence of the first one. For example, if a light is directed into the eye of an individual, the pupil of his eye will contract. If a bell is sounded each time the eye is exposed to the light, after a while the sounding of the bell alone will cause the pupil to contract. The subject of the experiment has, as we say, become "conditioned" to the sound of the bell. This conditioning will disappear and become extinguished, if he repeatedly hears the bell without being exposed to the light, but it can be reinstated with a few more trials in which the bell and the light are used together.

What we are describing is what is termed "classical conditioning," so called because the experiments conducted more than fifty years ago by I. P. Pavlov, the Russian physiologist, are considered the first and therefore the "classical" examples of countless conditioning experiments that have since been conducted in physiological laboratories, particularly in Russia. There has been a fair amount of research in classical conditioning in American laboratories as well, but it has been almost exclusively concerned with eyelid reflex and psychogalvanic response (changes in the electrical conductivity and potential of the skin) and thus of little direct practical application to classroom learning.

Operant Conditioning. Most of the research in learning conducted by psychologists in the United States and Canada has been concerned with an approach that is quite different from that of classical conditioning—an approach that is termed "operant conditioning" or "instrumental conditioning." Operant conditioning research is of greater immediate interest to educators than is research devoted to classical conditioning because it provides a wide range of possibilities for classroom application. Research with operant conditioning makes use of the simple observation that living organisms tend to repeat behavior that is satisfying and to avoid behavior that is not. The experimenter can thus manipulate and "shape" the behavior of experimental subjects by presenting stimuli that have satisfying effects whenever the subjects show any behavior that is of the type he is seeking. The presentation of such stimuli is said to "reinforce" the behavior in question. Corn is used to reinforce the behavior of pigeons, and both candy and praise have been used to reinforce the behavior of children in operant conditioning experiments. Complex organisms, such as pigeons and people, have a large range of responses they can make to any situation. Some responses are likely to have a

higher priority than others in a given situation, but over given periods of time the subject of an experiment is likely to display several kinds of behavior. The experimenter's task is to reinforce certain responses and ignore others, thus causing certain kinds of behavior that ordinarily would have a low priority to move up to a position of higher priority.

B. F. Skinner (1953), the leading exponent of research based on principles of operant conditioning, has found that it is not necessary to reinforce every satisfactory response in order to get results. Both pigeons and people seem to work harder if they are reinforced only intermittently.

One of the reasons for the growth in interest in this type of conditioning is that it permits a much larger scope of operations for the researcher. Whereas the experimenter in classical conditioning is limited to preexisting linkups of stimulus and response, the operant conditioning researcher can, by presenting or withholding certain stimuli, get the organism to display a wide range of behaviors. Skinner has, for example, taught pigeons to play table tennis and to serve as the directional systems for guided missiles. Operant conditioning is also of interest to the teacher because it provides some clues to the reasons for success and failure in the classroom. Teaching success occurs, according to operant-learning theory, when desired behavior has been adequately reinforced. Teaching failures occur when undesirable behavior has been reinforced. Teachers apparently can control learning by providing reinforcement (presumably in the form of approval or praise) when the student makes a move in the desired direction. Teachers can sabotage their own efforts by inadvertently reinforcing (through giving attention, sympathy, or whatever) when the student engages in behavior that leads away from the teacher's goals.

Problems in Applying Operant-Learning Principles in the Classroom. When we were discussing the shortcomings of reward-and-punishment approaches to learning in the preceding chapter, we pointed out that it was not always easy for teachers to determine what students would consider a reward, that a reward for one student may be perceived as a kind of punishment by another. The same difficulty occurs when teachers try to apply the principles of operant learning in the classroom. What behavior on the part of teachers constitutes reinforcement? Unless the teacher knows what will reinforce indications of the kind of behavior that he is seeking, he will be at a loss to know how to proceed. Praise is an obvious form of reinforcement, yet not all students want to be praised by the teacher. Some are embarrassed, and some actually resent it. In some classes, such students are "special cases"; in other classes, mistrust of adults may be so widespread as to make the usual forms of reinforcement ineffective.

In a more typical situation, however, some kind of positive attention does appear to have reinforcing value. Ellis Batten Page (1958) conducted an interesting piece of research that demonstrates this principle. He asked 74 secondary school teachers to perform the following experiment. After they had administered, scored, and graded whatever objective test they happened to be using at the moment in their classes, they randomly divided the tests into three piles. The "no comment" pile received no marks other than those used for scoring and grading. On the test papers in the "free comment" pile they wrote whatever thoughts they felt were appropriate for the particular students and their performance on the tests. The "specified comment" pile received certain uniform comments which Page had prepared beforehand for all similar letter grades and which were considered to be "generally encouraging." The effect of this treatment, as revealed in the very next tests the students took, was consistent with operant-learning theory. Students whose papers had been in the "free comment" and the "specified comment" piles showed improvement in their scores, with the "free comment" group showing the greater improvement. There was no improvement on the part of the "no comment" group. Incidentally, Page had asked the teachers to predict the effect the comments would have on student performance, and most of them had said that the better students would be more responsive than the poorer ones. The results showed, however, that good and poor students alike responded favorably to the comments.

The administration and grading of tests takes up only a minor fraction of the teacher's classroom activity. How can he reinforce their behavior at other times? His problem here is confounded by numbers. A great deal of the time he must treat the class as a group and thus may have difficulty in being selective in applying or withholding reinforcement. Three students in a class of 40 may be engaging in the kind of problem solving that a certain teacher is trying to encourage, 17 may be paying attention only marginally, and the remaining 20 may be woolgathering, passing notes, whispering, doodling, or engaging in other behavior contrary to his goals. Schedules of reinforcement work best on a person-to-person basis, and the complexities posed by mass education make their use difficult, if not impossible, much of the time.

Skinner's answer to this problem is programmed learning, in the form of what has popularly been called the "teaching machine." The first attempts at automated teaching were conducted by Sidney L. Pressey (1926), who designed machines in which students were presented with series of questions, one at a time. Each question was followed by several possible answers (usually four), and the student pressed a button to indicate the choice that he thought was correct. Such machines did not attract a great deal of atten-

tion until Skinner developed models and programs that incorporated operant-learning principles. Table 8-1 contains some excerpts from a program in high school physics designed for use in one of Skinner's machines. The machine presents the student with incomplete statements, one at a time. As the student reads each statement, he writes in the word or phrase that completes it. He then operates a device that exposes the correct answer, compares it with his response, and moves a lever that brings up the next question. In the material shown in Table 8-1, the answer to the first question is quite obvious. The student's discovery that he has produced the right answer presumably rein-

TABLE 8-1. Excerpts from a Program in High School Physics Designed for Use in a Skinner Type of Teaching Machine. The Machine Presents Each Item One at a Time. The Student Completes the Item by Writing His Answer in the Blank and Then Uncovers the Correct Answer at the Right (Skinner, 1958)

Sentences to Be Completed	Word to Be Supplied
1. The important parts of a flashlight are the battery and the bulb. When we "turn on" a flashlight, we close a switch which connects the battery with the _____.	bulb
2. When we turn on a flashlight, an electric current flows through the fine wire in the _____ and causes it to grow hot.	bulb
3. When the hot wire glows brightly, we say that it gives off or sends out heat and _____.	light
4. The fine wire in the bulb is called a filament. The bulb "lights up" when the filament is heated by the passage of a(n) _____ current.	electric
5. When a weak battery produces little current, the fine wire, or _____, does not get very hot.	filament
6. A filament which is less hot sends out or gives off _____ light.	less
7. "Emit" means "send out." The amount of light sent out, or "emitted," by a filament depends on how _____ the filament is.	hot
8. The higher the temperature of the filament, the _____ the light emitted by it.	brighter, stronger
9. If a flashlight battery is weak, the _____ in the bulb may still glow, but with only a dull red color.	filament
10. The light from a very hot filament is colored yellow or white. The light from a filament which is not very hot is colored _____.	red
.	
.	
.	
(seventeen items intervene here)	
.	
.	
28. The light from a candle flame comes from the _____ released by the chemical changes as the candle burns.	energy



Audio-Visual Services, Alameda County Schools

One of the advantages of the teaching machine is that students can carry on learning activity independently.

forces the learning that is taking place, and he is thus motivated to try the next question. Because the second item builds on the first, the answer to this one is also obvious, and success again reinforces the student. The third item builds on the second, and so forth. If a program has been properly constructed according to Skinner's specifications, the student should be able to complete it without error. Proper "programming" is essential; if vital information has been omitted from any step, the student will fail, will not be reinforced, and learning will not take place efficiently. Item 28 in Table 8-1 shows how difficult an item can be, when important intervening concepts are omitted.

Programmed learning enables teachers to break the group situation of the classroom into individual learning situations in which the student does his own reinforcing by having successful experiences with a teaching machine. This resolves the difficulty of how to provide reinforcement for individual students, but there are other problems. For one thing, there are not enough programs available to provide a satisfactory coverage of school curricula. Even if there were, few schools are set up to provide programmed instruction for all its students on any kind of a consistent basis. Another and less costly development has been the programmed textbook, which requires the student to answer questions and look on a certain page for the answers. If he has answered satisfactorily, he may go on to still another page of questions, otherwise the text refers him to pages containing simplified review material.

Although the past few years have seen the development of a rich variety of programmed materials, research studies have not been able to show conclusively that Skinner's approach to programmed learning has any advantage over Pressey's. Shirley Curran Lublin (1965), for example, tried various ways of reinforcing learning in a programmed course and found that *no* reinforcement gave the best results. Students with strong needs to engage in independent thinking did very poorly, which led the researcher to wonder whether error-free programs, such as Skinner's, are actually too easy to be very interesting. Negative findings have also been reported by other researchers (Roth, 1963; Roe, Case, and Roe, 1962; Welsh, Antoinetti, and Thayer, 1965).

The question might also be raised as to whether experimental psychologists, such as Skinner, actually have much of value to say to teachers. In the middle 1950s, some of the leading people in the field of learning, for example, Ernest R. Hilgard (1956), were quite dubious about the advisability of translating and applying laboratory findings to classroom practice. The intervening years have witnessed a number of energetic and often creative attempts to develop techniques based on Skinnerian principles that might be used in instruction. Teaching machines are one example. The fact that such devices have had only a limited degree of usefulness does not mean that the research has been faulty or the underlying principles unsound, but rather that the developers have failed to take cognizance of the complexity of teaching-learning problems as they exist in a typical classroom. Laboratory conditions are highly controlled; in order to do an experimental test of hypotheses based on learning theory, researchers have to create highly artificial situations. Consequently, they eliminate or do not consider such factors as differences in social class, self-concept, and previous experiences of learners—factors that

have been shown to make significant differences in learning rate and performance of students.

The proposition that people learn because their responses are conditioned or reinforced is one that is acceptable to teachers, psychologists, and laymen alike. It is an idea that helps explain the learning that takes place in a classroom—but only up to a point. It helps explain why Jean learned her multiplication tables faster than anyone else in the class, namely, because her performance was reinforced by the teacher's encouragement. But it does not explain why Sara, who could have learned the tables as fast as Jean, never learned them at all. We can say, of course, that the teacher's words of encouragement had a reinforcing effect on Jean's behavior, but not on Sara's, but such an explanation leaves us at loose ends. *Why* did the teacher's attempts to encourage not reinforce Sara's behavior? The theory does not tell us why attempts to reinforce responses work with some people and not with others. Nor does it give us any clues to how teachers might act in order that learners may be reinforced.

One of the dangers that is implicit in a preoccupation with a conditioning or a reinforcement approach to learning is that we might become overly concerned with techniques. It thus becomes all too easy to believe that we can promote learning by the proper technique or combination of techniques. It is this belief in a mechanical approach to learning that leads us to ask the "experts": "How can I get my Sunday school class to learn the books of the Bible?" or "How can I get my child to stop sucking her thumb?" or "How can I teach students the importance of good manners?"

In a paper analyzing problems in the field of educational psychology, Ernest A. Haggard (1954) made this comment on the failure of laboratory psychologists to make any major contributions to our understanding of the teaching-learning process:

Most learning theorists still seem to think of their subjects as physicalistic machines which should display an invariant relation between input (stimulus) and output (response) variables. In such schemes learning tends to be thought of as a function of what the experimenter does, rather than what the subject already knows, or is interested in, or thinks and feels about the learning experience or the material to be learned. Consequently, learning has usually been defined as the modification of the relations between rather discrete stimuli and responses, or as the modification of response systems resulting from after-the-fact events (rewards or punishments) which presumably determine such modifications.

The theories of learning that have been developed by the laboratory psychologists are an attempt to explain all learning in terms of its simpler elements or forms. Such explanations work best when one tries to explain the

learning of animals, small children, and older children and adults who are for some reason unwilling or unable to function intelligently. However, they are of little practical value when it comes to explaining learning of a more complex nature. To put the theories based on conditioning and reinforcement to the test of "an adequate theory of learning" that we proposed a few pages back, it appears that such theories probably do extend our understanding of *some* learning processes, but not *all* learning processes. They extend our understanding of a limited number of the conditions and forces that affect learning, and within the confines of the laboratory situation they permit reasonably accurate predictions about the behavior of learners. They are most deficient when it comes to clues to improving teaching methods and hypotheses that can be used as a basis for research into the teaching-learning process.

GESTALT, FIELD-THEORY, COGNITIVE, AND PHENOMENOLOGICAL APPROACHES

Gestalt Psychology. About the time Pavlov was conducting his classical studies of conditioning, a number of psychologists, Wolfgang Köhler, Kurt Koffka, and G. W. Hartmann, were developing theories concerned with experience and perception. Both experience and perception are larger aspects of behavior than are the specific responses that form the bases of the research conducted by laboratory psychologists. The inclusion of experience in a concept of learning means that the learner approaches the learning situation with a complex of attitudes and skills drawn from previous learning. He has some expectations of himself and learning situations in general. He is in a position to initiate, terminate, and direct his own learning, within the limits imposed by his ability and experience. Instead of responding to the learning situation in terms of specific, isolated stimuli, he perceives it as a whole and responds to the elements that seem significant to him. In effect, the learner organizes the stimuli that go to make up the learning situation into some kind of pattern or whole that has some meaning for him. What the learner perceives is for him a "Gestalt," the German word for "form" or "configuration."

According to the Gestalt psychologists, learning takes place through insight. A child trying to divine the meaning of an unfamiliar word will puzzle over it, perhaps sound it out phonetically, think of what familiar words it resembles, and try to see its relationship to the rest of the sentence. In other words, he uses his experience to test out several possibilities and tries to relate what he perceives to the larger idea embodied in the sentence.



*"That shows how high the water was.
The same thing happens in our bathtub."*

Vahan Shirvanian, Look Magazine. (Reproduced by permission.)

Learning that takes place through discovering similarities and relationships between two apparently unrelated events is based on insight.

For a few minutes he makes no progress at all and is finally about to give up and ask the teacher what the word is, when all of a sudden, he recognizes it. This is the "aha!" phenomenon, the flash of insight, that we have all experienced at such times. This is no gradual process whereby we move closer and closer to the meaning of the unknown word. Instead, there is a preliminary stage where all is confusion, and then suddenly everything makes sense. Learning is thus seen as a process whereby problems are solved through a series of discoveries, discoveries facilitated by previous experience. By such organizing and reorganizing of experience, we learn to make sense out of the world around us.

The approach of the Gestalt psychologists is potentially more useful to the teacher than that of psychologists whose concepts of learning are limited to classical or operant conditioning. Gestalt theories take into account aspects of behavior, such as insight, which are useful in explaining problem solving

and which are ignored by popular and traditional theories of learning. However, they do not go far enough; they do not attempt to explain why learners develop the particular perceptions they do develop, nor do they explain why some learning situations are perceived as problems to be solved, and others are not. For this extension of Gestalt psychology, we must turn to the field theorists.

Field Theory. Field theory attempts to explain human behavior in terms of the way in which an individual responds to the forces in his environment, and particularly his *social* environment, forces that push and pull him this way or that. The attitudes, expectations, feelings, and needs of the individual determine to a large degree the power of the forces present in his psychological field. Changes in the field produce changes in behavior. The field theorist is careful to point out that the field he refers to is the environment *as seen or perceived by the individual*.¹ It is important to note this qualification, because teachers sometimes make the mistake of assuming that because the psychological field has changed as far as *they* are concerned, it has also changed for the students they are attempting to teach.

Mrs. Hillegas had given Larry, a nonreader in her third grade, a book on locomotives, with many pictures and short words and sentences, in the hope that his interest would be captured enough for him to make an effort. A few minutes later she walked by his seat. The book was closed, and Larry was staring out the window.

"Did you like the book, Larry?" she asked. "It's all about trains. Your Daddy works for the railroad, doesn't he?"

Larry turned and looked at her without expression.

"You forgot I can't read," he said.

Mrs. Hillegas assumed that giving Larry a book on a new subject would change the field for Larry, that he would perceive this book as different from the other books he had handled. But for Larry, who at the age of nine has a long history of failure and humiliation, all centered around books, a book is still a book.

In order to gain any understanding of a child's psychological field, adults have to develop a high level of empathy or sensitivity for the feelings and attitudes of children. If they are concerned only with their own feelings and not with those of children, they will continue to misunderstand why children behave and react as they do.

Although the amount of experimentation undertaken by field theorists has in no way equaled the quantity produced by the conditioning and rein-

¹ See the discussion of the phenomenal or perceived field in Chapter 2.

forcement psychologists, much of it, particularly that performed with human subjects, has been of great value to the educational profession. One of the classic experiments in this area of psychology concerned the concept of "social climate" and was conducted by Kurt Lewin, Ronald Lippitt, and Ralph K. White (1939).² Four small groups of eleven-year-old boys were organized for the ostensible purpose of engaging in activities of a recreational nature. Each club was supervised by an adult leader for 7 weeks, whereupon a different leader took over. Over a period of 21 weeks, each club was supervised by three different leaders. Leaders had been coached by the experimenters to play a different kind of role and thus create a different kind of social climate with each club they supervised. With one club they were supposed to be autocratic, with another they were to be democratic, and with the third they were to be *laissez faire* (no control at all). The experiment was organized in such a way that each club had the experience of being directed by each of the three kinds of leadership. The theory that changes in the psychological field will produce changes in behavior appears to have been borne out by the experiment, inasmuch as the groups demonstrated a different kind of behavior with each of the three kinds of leaders. When the psychological field was influenced by leaders playing democratic roles, groups were characterized by greater interest and personal involvement in club matters. They took the responsibility for initiating and completing tasks. When club leadership was of a *laissez-faire* nature, the behavior of the members was characterized by frustration, discontent, and poor morale. Under autocratic leaders, boys were either apathetic or actively hostile.

Although this study is often cited as a demonstration of the superiority of democratic group leadership, we have described it here principally to show how a change in the psychological field produces changes in behavior. It is reasonably certain, too, that quite different kinds of learning would take place in classrooms with each of the three different kinds of psychological climates we have described.

The work of the field theorists extends some of the ideas of the Gestalt psychologists in that it is concerned with "whole" aspects of behavior and the "structure" of what is perceived by the individual. Such emphases are of interest to the teacher, who also deals with "behavior as a whole" and who tries to "structure" the teaching-learning situation in ways that will stimulate learning. Indeed, one of the main contributions of field theory is the idea that teachers can structure and restructure situations to produce different kinds of emotional or social climates, which, in turn, have different effects on the learning of students.

² See discussion of emotional climate in Chapter 4.

Learning as Problem Solving: A Cognitive Approach. A few years before Pavlov and the Gestaltists were starting down their separate paths in the study of learning, a New England-born philosopher named John Dewey took up the task of analyzing and understanding learning from a totally different point of view. One special difference in Dewey's approach was his concern with the kind of learning that goes on in classrooms, whereas the conditioning and reinforcement psychologists, as well as the Gestaltists, were primarily concerned with laboratory experimentation. Dewey produced no formal research; instead, he analyzed, probed, and theorized. He did not try out his theories in the laboratory, although he did test them out in the classroom in practical ways. It is perhaps because he was concerned with practical rather than research problems that psychologists, even educational psychologists, have ignored his work, even though he was one of the first presidents of the American Psychological Association. The audience for Dewey's writings, however, consisted of the educational, rather than the psychological, profession, because he communicated directly to the people who taught in the classrooms and administered the schools. The educational psychologists of Dewey's day were more likely to take their cues from E. L. Thorndike, who not only developed theories of learning along conditioning lines, but also produced prodigious quantities of research data. Furthermore, the theories of Dewey were constructed on a large scale. They were concerned with the *whole* child in a *total* situation, rather than with the precise analysis of minute fractions of the learning process. His theories were therefore difficult to test, using the research methods that were available to the psychologists of that day. It is only in recent years that research workers have developed the methods and perhaps the inclination to put Dewey's theories to the test. For example, we are now beginning to encounter an increasing number of studies dealing with background factors of motivation and with the psychodynamics of the classroom. Of particular interest are the studies that attempt to test Dewey's theory that democratic methods are, after all, the best means to help learners learn in a democracy.

According to Louis P. Thorpe and Allen M. Schmuller (1954), Dewey's great theoretical contribution was his view of learning as problem solving—a refinement of the processes whereby individuals adjust to their environment. Dewey's statement regarding the development of the power of judgment in children reveals his point of view on this matter:

The child cannot get power of judgment excepting as he is continually exercised in forming and testing judgment. He must have an opportunity to select for himself, and then to attempt to put his own selections into execution that he may submit them to the only final test, that of action. Only thus can he learn to dis-



Acme

Although the breadth and scope of John Dewey's theories about learning have made it difficult to test them experimentally, such research as has been done with them tends to support his conclusions. The photograph shows him surrounded by children on the occasion of his ninetieth birthday, which he celebrated in 1949. He died in 1952.

criminate that which promises success from that which promises failure; only thus can he form the habit of relating his otherwise isolated ideas to the conditions which determine their value. (Dewey, 1903.)

And, again:

The only true education comes through the stimulation of the child's powers by the demands of the social situations in which he finds himself. (Dewey, 1940.)

In recent years the concepts and theories developed by Dewey have had an increasing effect upon the content and focus of educational psychology. Today we are more concerned with studying the child in relation to his social environment, as Dewey urged, than we were a generation ago, when we seemed preoccupied with measuring his various abilities and traits. The

research of Lewin, Lippitt, and White and others into the social forces governing the behavior of children has lent support to the acceptance of Dewey's theories, as has the increasing interest in problems of mental health in the classroom. Indeed, there are few if any of Dewey's statements that would not be acceptable to mental hygiene workers today. Somehow, they do not seem as radical and as revolutionary as they appeared to be when they were first uttered, at the turn of the century. Classroom practice still lags far behind, of course, but it has made much progress since Dewey first uttered his challenging words. At the present moment of writing it appears as though the reform in educational practices has been stalled through a revival of traditionalism, with the result that some schools have become concerned, as were schools early in the century, with the memorization (sometimes termed "mastery") of facts related to isolated blocks of subject matter. John Dewey is often portrayed by traditionalists as a kind of impractical visionary who somehow led American educators astray. What such critics overlook, however, is that Dewey's criticism of traditional education was based on the most practical kinds of considerations. He felt that the education which does not develop the thinking processes of children and which does not improve their ability to solve problems outside the classroom as well as in it is largely a waste of time. And he was skeptical regarding the unfounded assumptions that traditionalists in education make all too readily—the assumption, for instance, that students automatically transfer the abstract concepts learned in the traditional classroom to the problems of everyday life.

A more recent exponent of problem solving in education is Jerome S. Bruner, an experimental psychologist who has become interested in the practical problems involved in teaching mathematical skills. Bruner (1964) makes use of such Gestalt concepts as "feedback," a process whereby the learner makes corrections and adjustments in his problem-solving strategy as a result of the errors he perceives. Discovery is an important part of effective problem solving, according to Bruner. He says:

Knowledge of results . . . should come at that point in a problem-solving episode when the person is comparing the results of his try-out with some criterion of what he seeks to achieve. Knowledge of results given before this point either cannot be understood or must be carried as extra freight in immediate memory.

Like Dewey, Bruner is pragmatic and practical:

If information is to be used effectively, it must be translated into the learner's way of attempting to solve a problem. If such translatability is not present, then information is simply useless. Telling a neophyte skier to "shift to his uphill edges"

when he cannot distinguish on which edges he is travelling provides no help; simply telling him to lean into the hill may succeed. . . .

Instruction is a provisional state that has as its object to make the learner or problem-solver self-sufficient. Any regimen of correction carries the danger that the learner may become permanently dependent upon the tutor's correction. The tutor must correct the learner in a fashion that eventually makes it possible for the learner to take over the corrective function himself. Otherwise the result of instruction is to create a form of mastery that is contingent upon the perpetual presence of a teacher.

Phenomenological Concepts of Learning. Like the Gestaltist and the cognitive theorists, proponents of the phenomenological approach to learning place great stress on perception—the way in which the learner views the situation in which he finds himself. The phenomenologists who have had the most to say about education are Arthur W. Combs and Donald Snygg, whose theories we discussed in Chapter 2, when we were emphasizing the point that each of us behaves in accordance with the way in which we view ourselves and the world around us. Each individual, we said, has a private world that constitutes "reality" for him. We also cited Combs and Snygg to the effect that changes in behavior are the result of changes in the way we perceive ourselves and our environment.

According to Snygg and Combs (1949), learning is a natural and normal process for children: it is an important dimension of normal growth and development. They are therefore much concerned with the enormous amount of energy that teachers invest in *making* children learn. They say, on this point: "The task of our schools . . . is not to make people grow. By their very nature they are bound to grow and the task of the schools is only to help them grow in socially desirable directions."

Because of our anxious concern as teachers that children fit themselves into patterns and perform tasks that are of *our* choosing, not theirs, we sometimes frustrate the main purposes of education. Such difficulties often occur when we want children to spend their time preparing themselves for the adult life that lies ahead of them, whereas they can see their needs only in terms of their own and very immediate private worlds.

The insistence of the child on pursuing his own immediate ends sometimes arouses a great deal of indignation from his elders, who are apt to feel that the only decent way to behave is by conforming to their plans and thus ministering to their needs; but the point of view of the student is necessarily different. . . .

As long as our schools persist in attempting to direct the child into activities which do not provide him with opportunities for immediate self-enhancement

[i.e., meeting his own needs as he sees them] children will show great ingenuity in avoiding these activities. They must do so in order to concentrate on their immediate personal problems, which are the only things important to them. The traditional school has countered this refusal to deal with material that has no personal value by inventing the conventional system of marking and promotion. . . . However, the victim of this trickery does not allow himself to be put upon. He maintains his integrity by dropping the material from his field [i.e., forgetting it] at the earliest possible moment, usually as soon as the mark has been assured. This state of affairs often results in the pupil's disregard of the subject matter entirely except as a vehicle for gaining approval or avoiding disapproval. And what he does or how he behaves toward it will depend on whose approval he is trying to gain.

The last three sentences in the quotation have reference to the fact that students who enjoy conforming to adult standards will attempt to perform the tasks assigned them by their teachers, will memorize the required material, but will forget it after the semester is over and the grade has been assigned. There are, of course, other students who are more interested in gaining the approval of the rank and file of the class, in which event they may find it more in keeping with their personal needs to defy the teacher by refusing to study or to make any kind of effort.

Many of the difficulties teachers encounter, according to Snygg and Combs, stem from their continued attempts to feed students facts and information that have no meaning or relation to the latter's lives:

One of the primary reasons for the ineffectiveness of our formal methods of teaching is that facts exist in the phenomenal field of an individual only if they have personal meaning for him. Facts that have no relation to him or his life task do not emerge into awareness, or they cease to exist in his field as their irrelevance has been discovered.

This comment is suggestive of some of the research of Hermann Ebbinghaus (1913), a pioneer psychologist, who experimented with the learning of various kinds of material, some of which had meaning and some of which did not. He found that the learning of the nonsense material took approximately ten times more effort and, furthermore, was forgotten more readily. To relate his findings to the work of Combs and Snygg (1959), we can say that when students encounter material that has no personal meaning for them, they learn it with more difficulty, because such material is, as far as they are concerned, mere nonsense. Actually, such material usually does take on a kind of meaning for students, but the meaning is the kind that prevents, rather than stimulates, learning. The demand that the student



San Francisco State College—Joseph Diaz

The abstract principles of civics become more meaningful when students participate in elections and other forms of student government, just as the abstract principles of physics become more meaningful (see facing page) when students are able to give them the empirical test.

. . . abandon his current problems and turn to the study of the required material is pretty sure to cause him to regard that material as an obstacle to self enhancement, as something to be avoided, a negative goal. If he remembers it at all after the examination is over he remembers it with this meaning and behaves toward it accordingly. If we wish a child to like a new food we give him the opportunity to eat it when he is hungry, when it will acquire the meaning we wish it to have. We do not, if we are wise, offer it to him when it will not satisfy his need; nor do we force it upon him under circumstances which humiliate or disgust him. Some parents, it is true, do make such mistakes, but teachers should be better trained.

Another related point brought out by Combs and Snygg is their observation that children are not able to solve problems they do not have—that is,

questions or assignments that they do not perceive or experience as problems—because such problems have no relation to their everyday life or experience.

These points of view find support in a variety of studies of classroom learning. G. M. Haselrud and Shirley Meyers (1959) had students work on two sets of problems. The subjects were given principles which helped them solve the problems in the first set, but had to derive the principles themselves in order to work the second set. When they were tested a week later, they were able to do better in solving the kinds of problems for which they had had to derive principles, than they were in solving problems for which principles had been given them. The point is that something we have learned "on our own" has more meaning and usefulness for us than something that is merely assigned or given to us, because it is more personalized, has more meaning for us, and is thus more likely to be remembered.



San Francisco State College—Joseph Diaz

Here are two more studies that had similar results. Miriam Howell (1951) conducted a six-month survey of spelling activities in a second-grade classroom. She noted that children studying spelling tended to learn more effectively and to display more favorable attitudes when they used vocabularies based on their own experiences than when they used vocabularies of words that were assigned by the teacher. H. E. Moser (1947) taught a group of second-graders the use of fractions, basing his instruction on their own experiences. They did much better than another group of second-graders who were taught the same material by drill methods.

Snygg and Combs have three recommendations for schools that want to facilitate learning by making use of the experience children bring to school with them.

First, they say, schools must provide opportunities for students to think of themselves as responsible and contributing members of society. A student must be given broad opportunities to identify with and be accepted by the socially desirable individuals and groups he admires. The student who identifies himself *with* society will not attack it as a delinquent.

Snygg and Combs feel that such an approach implies a democratic classroom, a classroom where students are helped to develop a sense of personal worth, are encouraged to participate freely in group activities, and are permitted to express opinions and feelings as freely and as openly as any adult.

Second, students must have opportunities for success and appreciation based on positive and productive achievement. Students should feel safe enough from humiliation to face their deficiencies and inadequacies and deal with them objectively. This freedom implies that each student will have opportunities to develop his own educational program and set his own pace. Snygg and Combs say that in a truly democratic classroom we do not have to worry about children selecting tasks that are too easy for them, because children do not choose such tasks unless they are afraid of criticism and failure. If they have no reason to fear humiliation, they will deliberately try themselves out on tasks of appropriate difficulty.

Third, schools must take advantage of the drive that is universal in all human beings, adults and children alike, to achieve their best potentialities and to develop efficiently and adequately. If schools could achieve the goals that are the natural objectives of this drive, they would not have to rely on the artificial stimulation of competition and traditional marking systems.

Applying Phenomenological Concepts of Learning. To teachers who have to cope with the everyday wear and tear of forcing students to complete their assigned lessons, such proposals as the above may seem visionary and idealistic.

Few schools have developed their philosophy and practice to the point where they can accommodate the kinds of changes implied by such ideas. Most schools run on a more or less traditional pattern, with control and responsibility for each class centered on the teacher and with relatively little freedom for the individual student, although students today *are* allowed somewhat more freedom of movement and expression than was the rule a couple of generations ago. Some schools try to conceal these controls behind a facade of democracy, as exemplified by the teacher who said, with smug self-assurance: "I run my class democratically. Each term I write the rules for classroom conduct on the blackboard, and so far the children have always voted unanimously to observe them."

Most teachers, who, after all, have to live with the realities of school systems that stress teacher-centered approaches to direction and control, may feel somewhat guilty, embarrassed, or defensive when they encounter the kinds of criticisms made by Snygg and Combs. Most teachers are more or less aware that children probably have unexplored potentials for growth and self-development, yet they feel that their hands are tied by the traditional practices that prevail in today's schools. They feel that any attempt they might make to bring about the kinds of changes demanded by writers like Snygg and Combs would result in strong opposition from other members of the educational profession, as well as from some of the more aggressive lay critics of school practice who are continually demanding that schools return to more traditional methods of education. Even if teachers had the freedom to revise methodology and curriculum and make classrooms more democratic, they would be beset by doubts as to whether it would really work. Hence any progress or reform will have to come slowly and gradually, if at all. Nevertheless, there are a number of steps that teachers can take as individuals and groups to make the schools more effective agencies in helping students learn.

1. Teachers can develop their understanding of why children behave as they do and of what promotes or deters learning.

2. Teachers can develop an understanding of their own needs and motives, particularly as they apply to students. Much of what occurs in the classroom, be it helpful or disturbing, is a direct or indirect outcome of what we might broadly term the emotional dimension of the teacher's life—his moods and feelings, his attitudes, and his general philosophy. Most of us are unaware of how readily others (including the students we teach) are influenced and affected by this aspect of our lives, largely because we know so little about the kind of people we are, emotionally and philosophically.

3. Teachers can work, within the limits of the freedom they have, to

them to identify with society, give them opportunities for positive achievement, and use the drive for learning that children already possess.

The recommendations of Snygg and Combs may seem ambitious and visionary, but they can be put into effect if teachers will address themselves to the tasks of understanding students, understanding themselves, working within the limits that are imposed on them by their situation, finding opportunities to discuss their work, and developing a feeling of importance with respect to their profession.

SUGGESTED PROBLEMS

1. Mrs. Rossi overheard David Schell, a kindergartener, say to another child: "It is very important for us to help each other." Because this is a very mature statement for a kindergartener to utter, she asked him: "Where did you learn that, David?" David answered: "From my father." David's father has been in this country for six years and speaks with a heavy German accent, but David's English has not the slightest trace of an accent. Using the various psychological theories discussed in this chapter, explain how David happened to learn his father's attitude toward helpfulness but not his father's German accent.

2. How do the various learning theories discussed in this chapter explain successful learning in such skills as skating, bicycle riding, and swimming? Select some skill you have learned and analyze the procedure you went through, using the concepts of learning discussed in this chapter.

3. The parents of Jerry Willson, aged 4, like to amaze their friends by having Jerry recite the capitals of the 50 states. Comment on the potential value that learning the names of these states has for Jerry.

4. When the United Food Corporation decided to launch a new breakfast food on the market, they called in Dr. Berman, an industrial psychologist, as a consultant to help them plan their advertising campaign. As Dr. Berman sat down with the vice president in charge of sales, he said: "The first thing we have to keep in mind is that getting the public to accept a new breakfast food is essentially a problem in learning." What did Dr. Berman mean by such a statement? Which of the various learning theories we have discussed will be most useful to him and why?

5. Mr. Meyer asked his fourth-graders to fill out a short questionnaire on leisure-time activities. When he divided the class into two groups, those that were above average in their reading ability, and those that were below, he found that the below-average readers had spent more time looking at tele-

vision than the above-average readers. How might one account for this difference by operant-learning principles? How might phenomenological theory account for the difference?

6. Two interesting contrasts in educational philosophies will be found in B. F. Skinner, *Walden II* (New York: Macmillan, 1948), and A. S. Neill, *A radical approach to child rearing* (New York: Hart, 1960). Read enough of the two books to get the "flavor" of their approaches and then compare and contrast the kind of teaching that might go on in two schools, one operated according to Skinnerian principles and one operated according to Neill's recommendations.

SUGGESTED READINGS

- Bruner, J. S., *The process of education*. Cambridge: Harvard University press, 1960. A penetrating analysis of classroom learning by a leading exponent of cognitive theory and based on ideas developed in a conference called by the National Academy of Science.
- Bigge, M. L., *Learning theories for teachers*. New York: Harper and Row, 1964. A brief survey of the major theories of learning, with a fairly complete treatment of cognitive-field theory approaches.
- Combs, A. S., and Snygg, D., *Individual behavior*, rev. ed. New York: Harper, 1959. The most complete statement of the phenomenological approach to classroom learning.
- De Cecco, J. P., ed., *Human learning in the school*. New York: Holt, Rinehart, and Winston, 1964.
- Dewey, J., *How we think*. Boston: Heath, 1910. Contains some of Dewey's best contributions to the concept of learning as problem solving.
- Fullagar, W. A., Lewis, H. G., and Cumbee, C. F., eds., *Readings for educational psychology*, rev. ed. New York: Crowell, 1964. See the first section, "Learning and learning theory."
- Harris, T. L., and Schwahn, W. E., *Selected readings on the learning process*. New York: Oxford University Press, 1961.
- Hilgard, E. R., ed., *Theories of learning and instruction*, 63rd Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1964. A series of papers, some presenting a review of learning theories and some suggesting how theories might be applied to classroom teaching.
- Lindgren, H. C., Byrne, D., and Petrinovich, L., *Psychology: an introduction to a behavioral science*. New York: Wiley, 1966. See chapter on learning.
- Rogers, C. R., Two divergent trends. In R. May, ed., *Existential psychology*. New York: Random, 1961. An interesting discussion (from the phenomenological point of view) of the two separate roads trod by psychologists and educators in their efforts to understand behavior and learning.

Thorpe, L. P., and Schmuller, A. M., *Contemporary theories of learning*. New York: Ronald, 1954. One of the few reviews of learning theory that assigns much importance to John Dewey.

Travers, R. M. W., *Essentials of learning*. New York: Macmillan, 1963. A scholarly review of the major theories of learning, including problem solving and the phenomenological approaches.

9 Cognitive and Affective Factors in Learning



Audio-Visual Services, Alameda County Schools

In Chapter 2, when we discussed the "inside" and the "outside" forces in behavior, we made the point that it was ordinarily quite difficult to separate them, partly because every action is in some way the product of both kinds of forces and partly because it is often hard to draw the line between the two. Nevertheless, we said, it was worthwhile making the distinction for purposes of analysis and description, in order to gain a better understanding of why we behave as we do.

The same kind of distinction could be made with respect to "cognitive" and "affective" factors. "Cognitive" ordinarily refers to behavior in which there is search for information and a high degree of awareness. Thinking and problem solving are examples of cognitive behavior. "Affective" would apply to aspects of behavior that involve feelings and emotions and that may at times lie outside the scope of awareness. Attitudes are often included in this category, not so much because we are unaware of them (actually, we may be very much aware), but because we often are unaware of the way in which they affect our actions. The interview that we presented in Chapter 2 between Miss Roth and Dick Hansen, the prematurely tall sixth-grader, provides some examples of this. Dick is very much aware of his feelings. If he completed a personality questionnaire, he would very likely say deprecating things about himself and would express considerable hostility toward the world. Nevertheless, he does not see a relationship between his feelings of inferiority and the way he acts toward others.

Learning is ordinarily thought of as a cognitive process. It involves information seeking, concentration, thinking—all of them cognitive states or activities. However, the amount of energy that we are willing to invest in order to maintain such states or carry out such activities will be determined by how we *feel* about the goals and conditions of learning. To be sure, we can put our feelings aside and buckle down to the task of reading three chapters for

tomorrow's quiz, but even our willingness to make so forthright a decision depends on our feelings and attitudes toward ourselves, toward our future goals, and toward life itself.

Then there are the kinds of learning that are not so obviously cognitive—"incidental learning" might be a good term. This is the kind of learning that takes place when opinions are shaped, when attitudes are formed, and when we seek certain kinds of reinforcement without being aware of what we are doing.

Joelle Branson admires Miss Klock, her physical education teacher. She likes everything about her—her skill, her poise, the efficient way in which she organizes chattering groups of ninth-grade girls into basketball and hockey teams. Joelle never had much interest in athletics, but now she does. She reads books on how to improve one's style in basketball, she volunteers for team sports, she practices after school, and in many ways indicates her interest in becoming expert in sports. In all this, she hopes, of course, that Miss Klock will notice and approve. This does not occur very often, but Joelle does have the satisfaction of knowing that she is developing greater skill in sports and in that way is becoming more like Miss Klock.

What we are describing here is "learning through imitation," a way in which we model our behavior after that of some admired person, usually without being aware why we are doing so.

The Need for Attention. The basic needs that we described in Chapter 2 can be said to function at a noncognitive level insofar as they affect learning. Here is an example of how *n Aff* affects social learning. If we enter a new school, we begin to look around for people who might become friends. In doing so, we will learn that there are certain places where people socialize, that certain groups who meet there seem to be self-contained and apparently not looking for new members, and so forth. We are conscious of a feeling of being on the outside and a little lonely, and may even be aware that we are actively looking for friends, although we are not so likely to be aware that we are actually learning how one contacts and makes friends in this new school. And so it is with other needs in the hierarchy.

The need for attention deserves special consideration in this discussion, because it is not ordinarily considered in relation to the more cognitive aspects of learning. According to popular belief, students learn because they are interested, because they want to get ahead, because they are expected to learn, and so forth. Most people would agree that there is a need for attention, but few are aware of the way in which it figures in learning.

In the preceding chapter we discussed a study by Ellis Batten Page (1958), which showed how giving attention in the way of written comments led both

good and poor students to improve their performance on a subsequent paper. Another study showing how attention can stimulate favorable attitudes toward learning was conducted by Donald L. Thistlethwaite (1959), who compared two groups of high school graduates who had been finalists in the National Merit Scholarship competition. One group consisted of a sample drawn from graduates who had received a certificate of merit and whose names had been published in a booklet distributed to colleges and universities throughout the country. In addition, the members of this group were acclaimed at high school assemblies and were the subject of newspaper stories. The second group was drawn from a larger group of merit finalists who had received somewhat less recognition in the press. In fact, a count of press clippings showed that members in the first group received approximately two and one half times more publicity than did the members of the second group. The two samples were matched according to college aptitude, father's occupational level, sex, and geographical region. Six months after students had graduated from high school, Thistlethwaite had them fill out a questionnaire dealing with their attitudes toward intellectual activities and their vocational and educational plans. He found that the students who had received the greater recognition were more likely to have favorable attitudes toward intellectual activities, were more inclined to plan a career of college teaching or scientific research, were more stimulated to seek Ph.D. or M.D. degrees, and were more likely to seek scholarship assistance in college. These differences were most marked for graduates whose fathers were not employed in professional or semiprofessional work. Because students from nonprofessional homes are usually less likely to plan on entering academic or research careers than are students from professional homes, the added recognition they received evidently had a pronounced effect on their attitudes and plans. Recognition had an even greater effect on the plans of girls. Approximately 50 per cent more girls in the group receiving special recognition, as contrasted with girls in the less recognized group, planned to seek Ph.D. or M.D. degrees and to become college teachers or research workers.

The relevance of these studies to our present discussion is this: if human beings did not have such well-developed needs for attention and recognition, writing comments on students' test papers or giving publicity to National Merit finalists would have little effect on their behavior. These studies show, too, that learning is only partly an intellectual process. The rewards that changed the behavior of the high school students who received comments on their paper and the graduates whose achievements were publicized were largely emotional in character. Learning may be perceived as a process consisting of our attempts to arrive at some kind of satisfactory balance or adjust-



San Francisco State College—Joseph Diaz

There is a great deal of highly significant cognitive and affective learning going on in this scene. At the more obvious level, the two children are learning to spell. In addition, the boy is learning to use a dictionary, and the girl is learning to type. They are also working together, hence are learning the attitudes and techniques that are involved in cooperation. The girl is learning a new dimension in communication (typewriting) and is also getting the feel of how a mechanical device functions.

ment between our psychological needs and the demands made on us by our environment. Making a successful adjustment that solves a problem with which we are faced may in itself provide the kind of reward required to produce learning, but if this reward can somehow be doubly reinforced by the satisfaction of another need, the chances of learning taking place are enhanced. We naturally tend to select behavioral patterns that result in satisfactions to the greatest number of needs. This tendency can be observed at all levels of human development.

After much trial and error, a baby learns to carry a spoonful of food from his plate to his mouth without spilling too much. The accomplishment of this complex task indicates that he has learned to organize and control his hitherto random and erratic behavior. The accomplishment also signals success in meeting psychological needs at several levels. For one thing, he has learned a new and more effective way of getting food, a skill related to the meeting of needs at a very primitive and physiological level. However, his need for food is not the most important need satisfied by his new ability. After all, he *could* eat with his fingers. But, like all of us, he has a strong need to belong to the world of people around him, and one of the ways in which he can belong to that world is to eat the way others eat. Learning to eat with a spoon is one way of participating in a society where everyone eats with the aid of cutlery. Then there is the praise and recognition that he receives the first few times he demonstrates his ability to accomplish this difficult task. His tentative efforts at eating with a spoon called forth comment and encouragement—a foretaste of the reward he would receive if he accomplished this feat of learning successfully. Then there is the pride of accomplishment at being able to tackle and master something on his own. In this he is rewarded by his own feelings of being adequate and competent.

Learning to write is similar in many ways to learning to eat with a spoon, except, of course, that it is a much more complex skill. It is not as obviously related to human survival needs, but, like eating with a spoon, it is a way of participating in a world composed of other people. Being able to write is an essential part of being a person in a civilized culture. In a culture in which everyone can write, the child who is unable to write feels left out. Not only does learning to write earn praise and acceptance from significant adults, but it also gives one a sense of adequacy and accomplishment. We do not have to work very hard at the task of convincing most children of the importance of learning to write, just as we do not have to convince most of them of the desirability of learning to eat with a spoon. There are children who are exceptions, of course, children who have needs or anxieties that for them have a higher priority than learning to write, and these children need special help and understanding. And when we say that all children feel the need to learn to write, we do not mean that the need is equally strong or that it occurs at the same age for all children. The main point is that the need to learn to write is, generally speaking, one that does not have to be artificially implanted or developed in children.

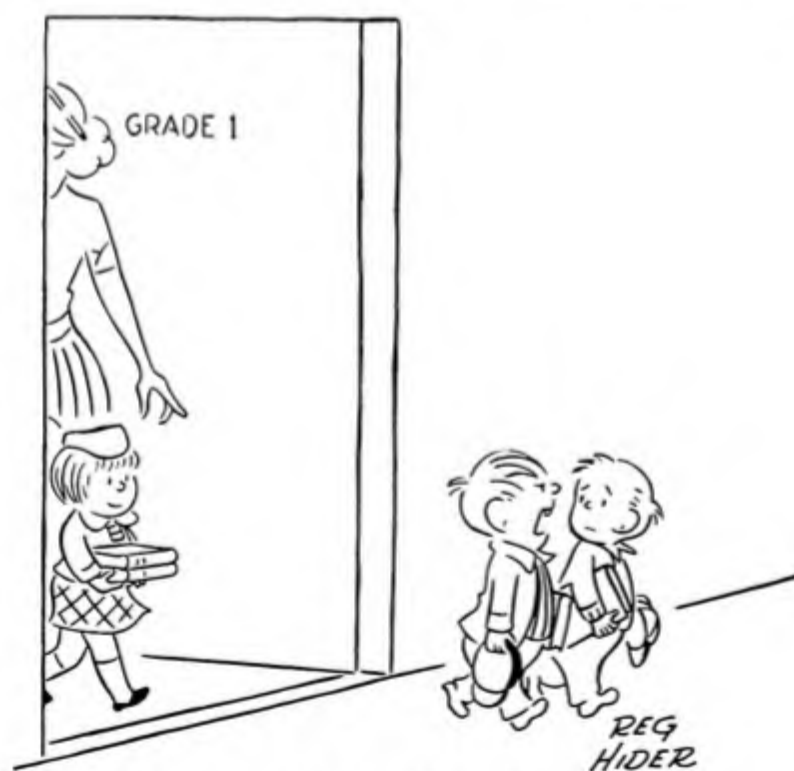
Intrinsic and Extrinsic Rewards. Although various kinds of responses can be reinforced by recognition, attention, encouragement, and similar kinds of “extrinsic” or “external” rewards, the strongest and most dependable moti-

Educational Psychology in the Classroom

vation for learning comes from the basic and dominant need to be adequate and competent. Jerome S. Bruner (1961) puts it this way:

. . . The degree to which competence or mastery motives come to control behavior, to that degree the role of reinforcement or "extrinsic pleasure" wanes in shaping behavior. The child comes to manipulate his environment more actively and achieves his gratification from coping with problems. Symbolic modes of representing and transforming the environment arise and the importance of stimulus-response-reward sequences declines.

Julia Weber (1954) points out in a paper dealing with the complications of child development for curriculum building that children *want* to learn, to know, to "be able." They do not, she says, have to be "teased" or "techniqued" into intellectual growth. Donald Snygg (1954) agrees. He says: "The learner is not the passive victim of his environment." However, in our eagerness to get students to learn the prescribed curriculum, we tend to overlook the obvious truth that motivation to learn springs from the needs of the learner, not those of the teacher. As a consequence, we think of motivation as something the teacher does *to* the student—a kind of winding him



"She was trying to get me to think again today."

Reg Hider, *NEA Journal*. (Reproduced by permission.)

up before pressing the button that starts him off on a learning experience.

To be sure, some students may show a greater need for extrinsic rewards than other students. Middle-class students grow up in a cultural environment in which academic achievement is considered to be a rewarding and satisfying experience, partly for its own sake and partly because continued and future success in college and in professions depends on present success in school. Lower-class students are likely to look for other rewards, particularly rewards that can be achieved in the immediate present rather than in the future. When high school students from middle-class and working-class homes were asked to undertake a task involving hand-eye coordination, middle-class students tended to get much higher scores than those attained by working-class students. However, when a money reward was offered for scores above a certain standard, working-class students tended to get scores that were equal to those attained by middle-class students, whereas middle-class students were unable to improve their scores. In another set of experiments dealing with improvement of intelligence test scores under the stimulus of a money reward, both middle-class and working-class students improved their scores, but working-class gains were greater and more consistent than middle-class gains. The experimenters concluded that when middle-class children are stimulated by money rewards to strive harder, the stimulus either raises the level of their performance or touches off anxiety responses that interfere with performance (Hoffman, Mitsos, and Protz, 1958). Elizabeth Douvan (1956) got similar results in a study of the rewarded and unrewarded performance of middle-class and working-class high school students. She accounted for the differences in response by the fact that middle-class parents continually compare their children to age-mates, urge them to greater and greater individual achievement, and teach them to respond to symbolic rewards (such as school grades). Working-class children, on the other hand, are not under such pressure to achieve and are taught to perform tasks in which the rewards (or punishments) are immediately forthcoming.

There are motives other than the responsiveness to reward or punishment that serve as the motive power for a great deal of learning. Children ordinarily have a keen curiosity about their environment. They want to know what makes clocks tick, what happens if you turn this crank, and where babies come from. Usually this interest does not run very deep for younger children. They want to know the immediate causes and not the remote ones. The story is told of the son of an eminent zoologist who asked his mother why weasels were white in winter and brown in summer. His mother said: "Why don't you ask your father? He's an expert, you know." To which the boy replied: "Well, I don't want to know *that* much about it!"

Inelasticity in the Learning Situation. A great deal of what children study in schools, particularly in the lower grades, is related to their basic needs to be competent and adequate and to satisfy their curiosity about their environment, but much of it is not. Many of the experiences that go to make up a standard curriculum would not be included if we used students' psychological needs as our sole guide. These other experiences are put into the curriculum because adults think they are important. We teach the skills of arithmetic not so much because students feel the immediate need of these skills, but because we think they will have a use for them later on. We teach history not so much because students have an avid interest in finding out what went on in previous centuries, but because we feel that understanding something about the people who came before us and the significant events of our past as a nation are an important part of being a citizen. Few people would object to the principle that the coming generation of adults should be familiar with the thoughts and actions of past generations or with the skills of arithmetic. The great problem is how to help students develop this familiarity without losing sight of their psychological needs and without violating any of the principles of learning. When we attempt to introduce this important material into the curriculum without considering the points of view and psychological needs of students, our efforts are largely ineffective, as Snygg and Combs have so ably pointed out (see Chapter 8).

There are, however, other sources of difficulty. One of them lies in the fact that education must go on five days a week, forty weeks a year, regardless of whether students are eager to learn. Unfortunately, their learning readiness, as well as their learning ability, varies from time to time. No one learns at an even, steady rate. Any curve of learning progress that extends over a period of time will show hills, valleys, and plateaus (see Figure 9-1).

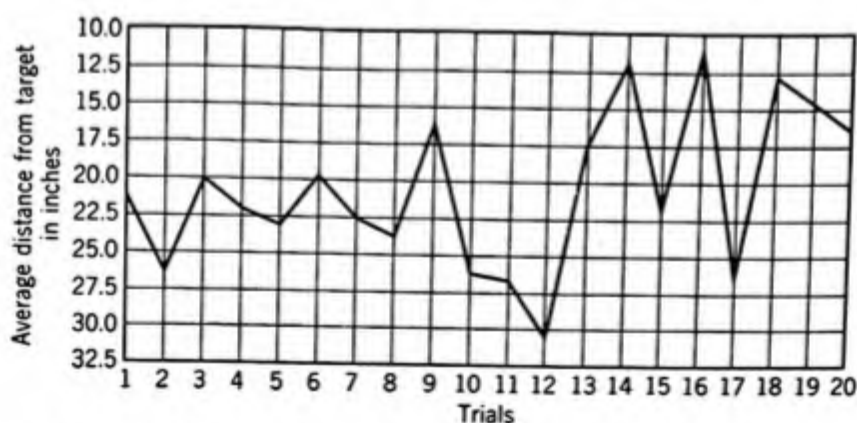


FIGURE 9-1. Learning through practice: improvement in tossing ten pennies at a mark from a distance of fifteen feet. (From the files of the author.)

When education is attempted on a mass basis, it is impossible to adjust it to each student's variation in learning. In spite of such flaws, a system of mass education is probably the most efficient way of meeting the learning needs of the largest number of children in any civilized society. But under a system of mass education there will be times when some students in each classroom group will be marking time or even regressing, instead of progressing. Such "pauses" in learning are not necessarily time lost, because it may be that the individual needs to assimilate the learning that has taken place before he can forge ahead and make new progress. Perhaps the student is adjusting himself to the experience of using the new skill or information, or perhaps he is temporarily distracted by the need to concentrate on other kinds of learning, because there are times when students are making their most active gains in learning outside of school. Even periods without practice produce learning. As William James pointed out, we learn to ice skate in summer and to swim in winter.

The Learning of Skills and Information. The kind of curriculum, methodology, and educational philosophy employed by educators depends to a large degree on the concepts they have of what children are to learn. Educators who are traditional in their approach are inclined to divide or fractionate what is to be learned into somewhat disconnected segments of behavior. Thus arithmetic is seen as having little to do with English and social studies, and the various arithmetic processes are seen as having little relation to one another. For such educators, education is largely concerned with imparting specific information and skills and is organized into subjects or courses that have little interrelationship. The three R's are examples of the kinds of skills that schools are expected to teach, and history, geography, civics, and rules of health are examples of information. Persons who think of education largely as a process of imparting skills and information also tend to hold to the other traditional concepts of education that we have mentioned—that is, they are likely to believe that children do not learn unless they are rewarded or punished, that children learn by becoming "filled with information," and so forth.

Some of the fallacies inherent in this approach to education are brought out in the following statement, made in connection with a study of human relations in school administration:

Educators have succeeded very well in gathering information and in making information available to people. They have done far less well, however, in helping people to make information so much a part of themselves that they *behave differently* as a result of the educative process. Few of us misbehave because we do not know any better. Most of us have tremendous stores of information that seldom

if ever appear in action. A truly effective education cannot be satisfied with helping its students intellectually "to know." "Knowing" must somehow be translated into behaving (Combs, 1954).

The Learning of Concepts. As the writing and research of the Gestalt psychologists and the field theorists became known in education, some educators came to feel that the older idea of the segmented or fractionated curriculum was psychologically unsound. The experiences of life do not recognize the separateness of subject-matter fields. The behavior involved in paying one's taxes, for example, may involve writing (English), computation (arithmetic), and dealing with a state agency (civics or social studies). Buying a living-room carpet may involve addition, subtraction, multiplication, division, percentages, fractions, decimals, interest, and a number of other mathematical concepts that are often taught separately.

The idea that the subject matter of education should be dealt with in terms of integrated concepts or wholes is what we shall call the "conceptual" approach to learning, as contrasted with the skill-and-information approach that we have just described. Teachers who are attracted to the conceptual approach are impressed by the fact that learning is reinforced when the various experiences of life, inside and outside the classroom, are seen by students as interrelated. Information and skills are more readily learned and retained if we can see how they are related to other things that we know. It is easier to remember the explorations of Lewis and Clark if we have a good grasp of the geography of the country through which they passed and have a good understanding of the political climate of the day as well. It is easier to understand and remember the principles of geometry and trigonometry if we can apply them to an understanding of mechanical drawing or woodworking.

This newer point of view sees what is to be learned in terms of broad concepts that are interrelated. It has led to the so-called core courses, which combine English and social studies; general education, which is concerned with the learning of basic concepts; and life-adjustment education, which is concerned with teaching material that students need to know if they are to learn to live more effectively. Teachers who support the conceptual approach to learning do not rule out skills and information. On the contrary, they feel that skills and information are essential. But they are also aware that our efforts at education often meet with failure because students do not see the relation between what we are trying to teach them and what they already know.

However, the problem of stimulating classroom learning cannot be solved

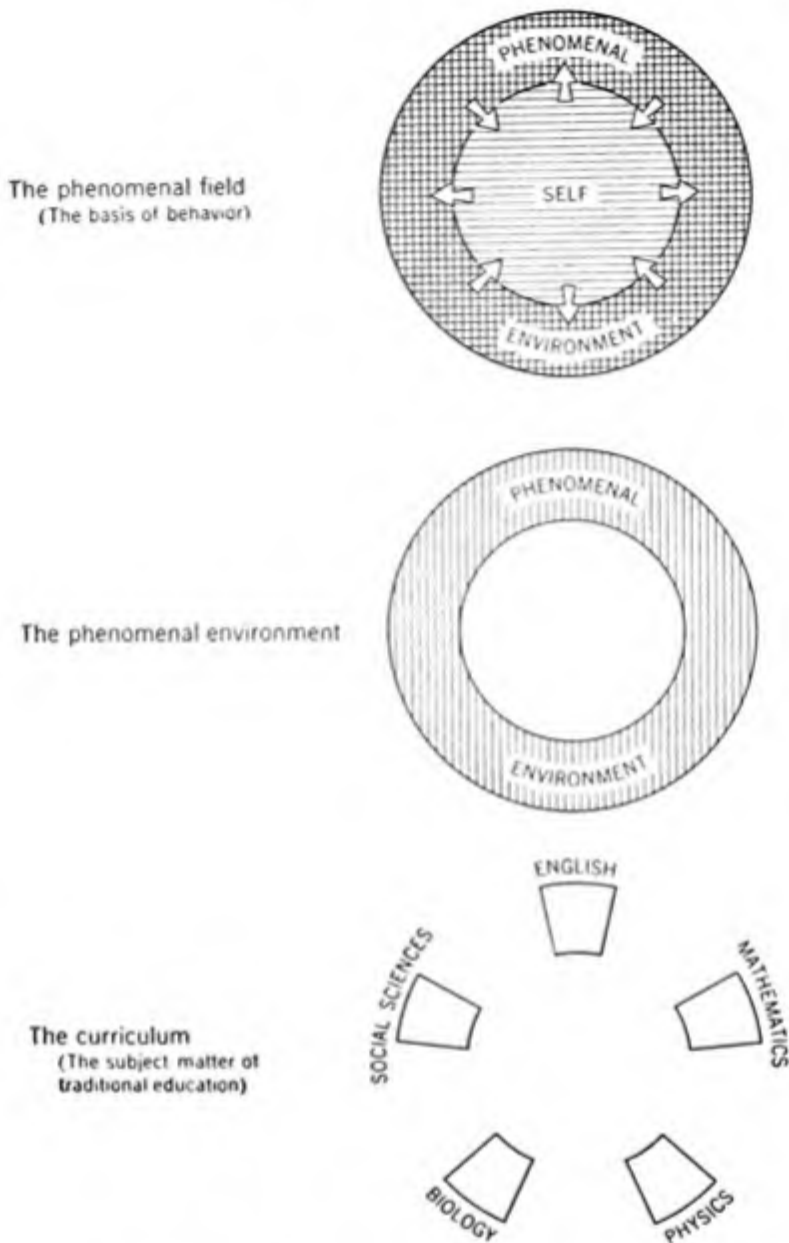


FIGURE 9-2. The phenomenal field and the curriculum. (Combs and Snygg, 1959.)

solely by integrating and organizing subject matter into more meaningful wholes. Snygg and Combs have criticized both the conceptual approach and the skill-and-information approach as being too superficial. Figure 9-2 illustrates their point. The top diagram shows the entire phenomenal field or private world of an individual. The second shows the external part of the field only, and the third shows how the external field is divided among the various fields of subject matter taught in the schools. The third diagram is representative of the approach used by teachers of the skill-and-information

persuasion. As Snygg and Combs (1949) point out, educators have for some time been aware that there are many gaps and inconsistencies in the traditional curriculum and have sought to remedy these deficiencies by developing curricula that correlate various areas of learning and show students their essential unity—the conceptual approach. If these reforms were carried through successfully, the field of education would be expanded until it could be represented by the middle diagram. But, say Snygg and Combs, this would not help very much, because educators would still be repeating the error of attempting to change the behavior of students by manipulating—doing things to—the environment *outside* the perceived self. Unless the way in which an individual sees himself and his environment is changed, no real learning will take place. Therefore, unless educators are prepared to go beyond the reorganization and integration of subject matter and deal with the perceptions of students, a great deal of the thought, energy, and expense that goes into education will continue to be wasted.

The Learning of Attitudes. What is needed, then, is to broaden the scope of the subject matter of education to include something more than skills, information, and concepts. In order to use the motivational power that must be mobilized if any significant learning is to take place, we have to involve the emotional as well as the intellectual aspects of the learner—the non-cognitive as well as the cognitive. To come to the point, teachers have to be concerned with the teaching of *attitudes*, as well as skills, information, and concepts. Bruner (1960) says that children need to learn certain general attitudes toward science and literature that will serve as bases for understanding how concepts are interrelated and for effective problem solving. Other kinds of attitudes are also important—attitudes toward teachers, the school, other students, and oneself. Teachers should also recognize that successful learning is accompanied by and results in changes in attitudes. By “changes” we do not necessarily mean changes in the *direction* of attitudes. Children ordinarily have an interest in and an excitement about learning. In this instance, the change is concerned with helping children develop and integrate these attitudes in such a way that they will willingly become involved in more complex learning tasks. The attitudes of a first-grader are of tremendous importance when it comes to teaching him to read, and his positive attitudes toward himself, the teacher, the school, and the world in general will change in the sense that they will develop and will be strengthened as a result of his having learned to read. Favorable attitudes are likewise a prerequisite for successful learning experiences in high school chemistry, and such experiences will in turn lead to the development of new attitudes toward science, oneself, and the world in general.

The learning of attitudes is basic to what Walcott Beatty and Rodney Clark (1960) call *significant* learning, as distinguished from *instrumental* learning. Instrumental learning is largely concerned with the learning of information, skills, and concepts that are related to the psychological needs of the learner. Significant learning, however, is learning that involves some changes in the "self-structure," that is to say, attitudes toward oneself or the self-concept itself. Significant learning necessitates new instrumental learning, as the individual finds ways of expressing the redefined concept he has of himself, but instrumental learning does not necessarily result in significant learning.

Learning, as we have pointed out previously, can be positive or negative, and this is also true of significant learning. A child who is continually reprimanded by the teacher for failures in spelling may learn to spell more accurately or he may learn instead to be anxious about spelling and to think of himself as a failure. Learning to regard oneself as a failure is a form of significant learning, if one has not been committed to such an attitude in the past. Significant learning may thus occur at any turn in the events of the school day. Percival M. Symonds (1955) points out that rewards become attached to the behavior that is being rewarded when we train animals, but when we educate human beings, we reward not only the behavior but the person himself. Hence any action of a teacher toward a student is likely to be perceived by the latter as having some reference to him as a person, as well as to his behavior.

A great deal of learning involving attitudes occurs largely as a by-product in everyday classroom instruction. In a discussion of emotional behavior and learning, John E. Anderson (1942) noted that "it is important for the teacher to recognize that, as a by-product, every form of learning develops a substantial series of attitudes, and that this by-product is often of more significance for adjustment than the primary skill being taught the individual." An example of what Anderson is referring to is that of the boy who transfers from another school a month or so after school has started. In order to bring him up to date, the teacher stays after school to give him a brief digest of the main topics the class has covered and to make some special reading assignments. This special attention may help the boy gain some understanding of what the class has been doing, but he may also learn something else that is even more significant—namely, that the teacher thinks he is important enough to merit this special attention. Such an experience may, furthermore, help him to develop positive attitudes toward adults in general.

Attitudinal Patterns and Classroom Learning. It is a common observation that boys have fewer difficulties with courses that stress problem-solving



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The ability to solve problems is to a large extent dependent on the attitudes that students have toward problem solving. These attitudes, in turn, are learned in the earlier years of childhood.

operations, such as physics, chemistry, engineering, and higher mathematics, than girls have. This male superiority in problem-solving courses is popularly assumed to be due to genetic (that is, inborn) differences in male and female mentality. Gloria L. Carey (1958), however, decided to explore the possibility that sex differences in problem-solving ability were largely attitudinal in nature. She gave college men and women a questionnaire dealing with attitudes toward problem solving, as well as a series of problems to solve. As might be expected, men displayed more favorable attitudes toward problem solving than women did and also did better in solving the problems. The next phase of the experiment consisted of group discussions in which an attempt was made to build up the confidence of the subjects in solving problems and to develop favorable attitudes toward problem solving. The third phase of the experiment consisted of an administration of a second

questionnaire measuring attitudes toward problem solving and an additional set of problems. Women improved their attitudes toward problem solving significantly and also increased their scores on the problem-solving test, whereas men did not. The results of the experiment indicated that the difficulties women have with problem solving are probably due to culturally determined attitudes and not to any lack of ability. Carey's study is particularly significant in view of the common tendency to ignore culturally determined attitude patterns when it comes to science and mathematics courses. Even when girls are markedly successful in such courses, as some of them are, we should keep in mind that such success has quite a different meaning for them in terms of future educational and vocational plans from that for boys.

Even among male students, attitudinal differences may have a profound effect on progress in various studies. Melvin A. Angell (1953) reports the interesting finding of a negative correlation between high school grades in English and university grades in pharmacy and engineering. This means that students with high grades in high school English tended to get low marks in pharmacy and engineering, whereas students who received high marks in pharmacy and engineering tended to have low marks in high school English. On the face of it, such a finding runs contrary to common sense: because English courses are supposed to improve the ability to communicate, and the ability to communicate is a basic skill that should apply in all courses in the curriculum, one would expect a positive, rather than a negative correlation between English and pharmacy and engineering. The explanation of this anomaly lies in the fact that students who get high grades in English courses tend to have different attitudes and interests than do students who get high grades in pharmacy and engineering.

Most teachers would probably say that the chief problem they have with respect to attitudes is that of getting students to develop attitudes favorable to school learning. In making this determination, they are in effect ignoring the importance of students' attitudes toward teachers, the school, life in general, and themselves. Students' attitudes are also a function of teachers' attitudes, another fact that we overlook all too easily. It is difficult to develop students who are enthusiastic, curious, and interested in growing intellectually, unless they are taught by teachers who are enthusiastic, curious, and interested in growing intellectually. The behavioral cues that students pick up from teachers are not limited to the subject matter at hand.

Let us suppose that a social studies teacher would like to see the children in his class develop attitudes that might come under the heading of "respect for the individual." He may be able to point out that the Declaration of

Independence and the Constitutional Bill of Rights are partially based on this attitude or principle. If he stops here, his efforts may amount merely to an attempt to manipulate the external environment of his students without really affecting them personally. But if he can help the students in his class to experience a deep respect and appreciation of the importance of the Declaration of Independence and the Bill of Rights in their daily lives, such a realization may aid the development of a genuine attitude of respect for people as individuals. It may be that the children in his class will need a great deal of help and guidance in developing the desired attitudes. Perhaps they have given the matter little thought in the past; perhaps they have not "lived enough." Hence the teaching of respect for individuals must rest on a broader base of experience. For example, the teacher himself can, in his relations with the class, show a respect and a tolerance for the feelings and opinions of students that adults demonstrate all too seldom; or he can arrange for certain kinds of learning experiences—panel discussions, group projects, or discussions moderated by students—which help to demonstrate his belief in this principle. Or there may be other methods more appropriate to the maturity of his class and the kind of relationship he has with them. But basic to any technique that he will use to help students change their attitudes in the direction of socially desirable behavior will be his ability to demonstrate his own belief in this kind of behavior.

Social psychologists have, in recent years, become increasingly interested in the function of group norms and group processes in the formation of attitudes. Studies by Muzafer Sherif (1958), S. E. Asch (1958), and Theodore M. Newcomb (1958) indicate that the attitudes of the group with which an individual identifies himself will have a marked effect on his attitudes and behavior. Teachers are ordinarily aware of this phenomenon; however, they have not, in general, seen how it might be used to advantage in the learning situation. Nevertheless, it appears that one of the areas of education in which great progress will be made during the next generation is the application of principles of group processes in the improvement of classroom learning. Hitherto we have been inclined to think of students learning, or not learning, as individuals. Now we are aware not only that they learn as individuals, but that much learning takes place with respect to what goes on in the group. For example, individual students tend to use the classroom group as a reference point in developing their attitudes toward education. If the group is favorable to classroom learning, the way is cleared for a fruitful relationship between teacher and students, but if the group is hostile or apathetic, there is much preliminary work for the teacher to do before he can even begin to create a situation in which positive learning will occur.

Personality Factors. The attitudes characteristic of an individual are likely to be consistent with or related to his personality traits, and these traits, in turn, tend to be expressions of deeper currents or trends in his personality. A person who is basically a trusting, sincere individual, for example, is likely to have such personality traits as honesty, sincerity, and perhaps even a lack of sophistication and will express attitudes that are consistent with his trusting and sincere nature. In other words, surface manifestations of behavior tend to be related to basic personality patterns. Human behavior tends to be consistent.

A number of studies in recent years have shown how personality traits or factors are related to school success. A few pages back we suggested that masculine personality patterns are correlated positively with success in mathematics and science, and that the kind of person who has a high degree of success in mathematics and science tends to have less success in English. Although such studies admittedly do not "tell teachers what to do" about the problem of the science-oriented student who is not very good in English or the literary-minded student who gets low grades in physics, they do help us to understand some of the noncognitive factors related to varying degrees of success in different school subjects. Here are some studies that point to other significant personality factors.

Carl J. Cooper (1964) did a correlational study of factors related to success in German and found that a test in English grammar and a special test designed to predict success in foreign languages gave the best correlations. However, success on a "paired-associates" memory task also correlated highly and significantly with German grades. The paired-associates task requires students to memorize sixteen pairs of nonsense syllables during the course of twenty-four sets of trials, each set consisting of two trials in which the student was given the nonsense syllables and one trial in which he was asked to recall them. This task took $1\frac{1}{4}$ hours and required a great deal of close concentration. Actual performance in such a task is a behavior sample of how an individual responds to a task that is difficult, boring, and offers few, if any, immediate rewards. Cooper suggested that students who are able to maintain enough interest and drive to complete such tasks are probably the same kinds of students who do well in foreign-language learning.

The performance of gifted high school science students was studied by Edwin A. Locke (1963), who found that self-control was positively correlated with grades for boys, but not for girls. On the other hand, impulsiveness was positively correlated with out-of-class achievement in science for girls, but not for boys. Boys who had a high degree of creative energy tended to do well academically, but the opposite held true for girls: those who had

Educational Psychology in the Classroom

a low degree of creative energy tended to do better. Girls who did much unassigned work tended to get poorer grades than girls who did less, although their out-of-class achievement tended to be superior. Studies of this sort reveal some of the complexities in motivation and suggest that some of the relationships between personality factors and school success are neither obvious nor easily explained.

Some of the more significant research with noncognitive factors and school success has been that done by Harrison G. Gough (1964) of the Institute of Personality Assessment and Research on the Berkeley campus of the University of California. Gough has used the California Psychological Inventory (CPI) to isolate eighteen personality factors. His research shows a high degree of correlation between at least eight of the traits measured by the CPI and scholastic success in high school. As the data in Table 9-1 suggest, scholastic success is strongly influenced by such basic personality traits as

TABLE 9-1. Correlations between Personality Traits Measured by Some of the Scales of the California Psychological Inventory (CPI) and High School Grades (Gough, 1964)

Name of Scale and What It Measures	Correlation with Grades
<i>Dominance</i> : leadership ability, persistence, and social influence	.29
<i>Capacity for status</i> : the personal qualities that underlie and lead to status (not the individual's actual or achieved status)	.33
<i>Responsibility</i> : conscientiousness, dependability	.44
<i>Socialization *</i> : social maturity, integrity, seriousness	.34
<i>Tolerance</i> : possession of permissive, accepting, and nonjudgmental social beliefs and attitudes	.35
<i>Achievement via conformity</i> : interests and motives that facilitate achievement in situations demanding some degree of conformity	.38
<i>Achievement via independence</i> : interests and motives that facilitate achievement in situations demanding some degree of autonomy and independence	.36
<i>Intellectual efficiency</i> : degree to which the individual is seen as efficient, clear-thinking, capable, intelligent, progressive, planful, thorough, and resourceful	.41

* Not the same as sociability, which is measured by another CPI scale that correlated only .25 with grades.

energy, ambition, and social maturity. Although these findings are consistent with common sense, they do make the point that noncognitive factors play a significant role in academic achievement.

Children's attitudes toward success and failure were the subject of another study of noncognitive factors and school success. Pupils in grades 3 to 12 were asked who was responsible for their success or failure: the student? the teacher? other forces in the environment? Students who named themselves as being responsible were inclined to get higher grades than those who shifted the burden of responsibility to the teacher or the environment. Incidentally, first-born children tended to give more responsible responses than later-borns, and boys who gave more responsible responses were more likely to spend their free time in some kind of intellectual activity (Crandall, Katkovsky, and Crandall, 1965).

Readiness to Learn. Ideas about when a child is "ready" for certain kinds of learning experiences have undergone a change in recent years. Conclusions drawn from earlier studies of child development tended to be rather restrictive about what teachers could do with children. Teachers felt, for example, that reading could not be started before a certain age and that certain arithmetical concepts could not be introduced until the third or fourth grade. Children today, however, come to school exposed to a great deal more intellectual and quasi-intellectual stimuli than was true of children a generation ago. Today's children not only spend one or more hours a day watching television, but have spent more time being read to or actually looking at books. The greater availability of 25-cent paperback children's books in the local supermarket has a great deal to do with this (Russell and Fea, 1963).

Some experts on learning, notably Bruner (1960), question whether there is actually any such thing as readiness and suggest that "any subject can be taught effectively in some intellectually honest form to any child at any stage of development." Although Bruner accepts the validity of Piaget's sequential steps of cognitive development, he says that "instruction in scientific ideas, even at the elementary level, need not follow slavishly the natural course of cognitive development in the child." The child's intellectual development, Bruner states, can be stimulated by presenting him with problems that "tempt him into the next stages of development." He quotes an expert in mathematics education as saying that "young children can learn almost anything faster than adults do if it can be given to them in terms they understand."

This optimism is not shared by most other educators and psychologists. David P. Ausubel (1962) of the University of Illinois, grants that children can learn far more in the way of mathematics than they are currently being

taught and that the learning of adolescents and adults is often impeded by the fact that they must *unlearn* certain concepts before they can assimilate new ones. But he points out that adolescents and adults have, generally speaking, a considerable advantage over children when it comes to learning complex material because they are more used to operating on a high level of abstraction than children are.

Irrespective of whether Bruner is overly optimistic or Ausubel overly cautious, the fact is significant that they do agree that children can learn more than current concepts of readiness would lead us to believe they can be taught. It seems likely that the attitudes of teachers, rather than learners, are the limiting factor here. Students are very responsive to teachers' attitudes. If teachers do not believe that students are capable of learning certain concepts and skills, students are quick to pick up this negative feeling and develop expectations accordingly. The expectations that students have about their potentialities for learning play a large part in their readiness to learn.

One factor in readiness is what psychologists call "set." "Educational set" is the way in which a student is oriented toward a certain subject, or toward learning in general, and constitutes what might be called a "cognitive style." One interesting study of the effects of educational set was conducted by Laurance Siegel and Linda Corkland Siegel (1965) of the University of Miami. The Siegels used a questionnaire designed to show preferences for learning factual material (such as the names of the kings of Sweden during the nineteenth and twentieth centuries) or the learning of concepts (such as understanding the causes underlying Sweden's neutrality during two world wars). Students characterized by conceptual sets toward learning did better in learning *both* factual and conceptual material than students with a factual set. This finding is consistent with the observations of Combs and Snygg regarding the superiority of conceptual approaches to learning to approaches that are concerned solely with the acquisition of information.

Wholes versus Parts. Another controversial area in education concerns the problem of whether it is better, when teaching a skill or a concept, to begin by teaching its component parts, one at a time, until the whole has been presented, or whether it is better to start with the whole and then take up the parts. In learning to play the piano, the part method would consist of teaching finger exercises and scales before permitting the learner to play actual compositions. Compositions would be learned a few bars at a time, and each hand's part would be learned separately. This method was very much in vogue among piano teachers a generation ago, but many if not most teachers today prefer a form of the whole method. Piano students today learn to play entire compositions appropriate to their level of competence,

and there is much emphasis on sight-reading, whereby students are encouraged to play unfamiliar pieces from start to finish, using both hands. In painting, the part method would require that individuals master the various strokes of the brush, highlighting, and techniques appropriate to various kinds of scenes before attempting to paint a picture.

Teaching via the part method has gradually declined partly because teachers have found it to be less efficient and partly because the interest and enthusiasm of learners tends to wane unless they can see some tangible or visible results. A piano student takes up the study of music because he wants to play compositions, not practice scales and finger exercises. Unless some whole experiences are introduced into the instructional sequence rather early, learners tend to lose interest and become apathetic. If no one were allowed to play tennis until he had mastered all the basic strokes, there would be very few tennis players. Incidentally, this example illustrates one of the fallacies often overlooked by the supporters of the part approach, namely, that mastery of all the basic strokes in tennis would not in itself mean that one could play tennis. The ability to play tennis may depend to a large degree on the mastery of strokes, but mastery of strokes does not constitute the ability to play tennis. There is an important integrating element that is usually omitted when the part approach is used exclusively.

The part approach to learning tends to ignore the learners' need to develop some kind of a frame of reference that will help them relate one aspect of what is to be learned to its other aspects and that will also help them relate their present learning experiences to previous learning. Hence it is not surprising that research studies by J. P. Guilford (1927) and E. B. Newman (1939) indicate that learning is facilitated and is retained more effectively when the material to be learned has meaning, organization, and structure. May V. Seagoe (1936) reported a number of experiments which indicated that the whole approach was generally superior to the part approach (1957). Percival M. Symonds (1957) reviewed research dealing with whole and part learning from the beginning to the middle of the present century and came to the conclusion that the results constituted a complete endorsement of the advantages of whole learning.

We pointed out in an early chapter that one of the prime objectives of education was that of facilitating transfer of learning. It is expected, for example, that the principles which students learn in classrooms will be transferred by them to situations and problems that they encounter outside the classroom. One of the advantages of the whole method is its facilitation of integration—that is, the learner is encouraged to look for interrelationships among the various elements of the problems and learning situations that con-

front him. In other words, the whole method encourages students to look for interrelationships and similar elements in the various problems and learning situations they encounter.

Problems Encountered in Using the Whole Method of Learning. Although the use of the whole method in learning has obvious advantages, it also presents some problems. One of the questions that the teacher must ask himself is this: How large should the whole be? Another problem has to do with interpretation: Just what *is* a whole anyway? What makes a whole a whole and a part a part?

The answer to such questions depends in part on the learner and in part on the material to be learned. The wholes for students who are intellectually less mature will be less inclusive and less complex than the wholes that can be comprehended by more mature students. Thus what is a whole for the less mature student would be considered a part for a more mature student. The basic problem is one of perception. In other words, is the learner able to see or perceive relationships among the parts of what is to be presented? If not, and if the material seems too complex or too ambiguous to him, it evidently needs to be broken down into smaller segments. If material seems significant to the learner, if he can see its importance and its relationship to his experience and to his self-concept, and if he perceives it as something that he can and should learn, it will probably have a "whole quality" for him.

"Whole" learning is generally better than "part" learning because the material to be learned "makes sense," because its various parts can be seen *by the learner* as interrelated, and because he sees a relationship between the central idea of the material to be learned and himself. An individual who has tried to play a game of tennis, however badly and amateurishly, will perceive the importance of developing a good backhand swing. The individual who has not had this experience does not see the relationship of the backhand swing to competence in tennis, nor does he see it as anything that he might be interested in mastering. In short, it has little meaning for him. It is not a part of a whole.

Another consideration is the student's educational set. Children who are set to perceive wholes turn out to be better readers than those who are preoccupied with details. This tendency is very strong and very consistent. Louise B. Ames and Richard N. Walker (1964), of the Gesell Institute of Child Development in New Haven, found that the tendency of kindergarteners to respond to Rorschach test blots as "wholes" was almost as good a predictor of their reading skill in the fifth grade as were their IQs. Evidently, the ability to perceive and understand larger concepts helps children to progress more rapidly in learning to read. Slow readers, on the other hand, concentrate on

one detail at a time and tend to get bogged down if too many details are presented at once. One answer to this problem is that of changing the child's set in such a way that he begins to respond to wholes, rather than parts. This approach, however, does run the risk of pushing the slower learner faster than he may be able to go.

The learning of parts or wholes is related to a point that we made in the preceding chapter regarding the learning of sense and nonsense. If the "whole" with which the learner is presented is too large to make sense to him, little learning, if any, will take place, because he is being asked, in effect, to learn nonsense. Or if the learner is presented with a series of "parts" which to him appear unrelated to anything in his experience, that is, which do not make sense, again we are asking him to learn nonsense. The fact that material to be learned must make sense serves to emphasize these points: first, that it should be presented as nearly as possible in the context or setting in which it is to be used; and second, that it must be related, as much as possible, to the student's previous experience. Hence, if we are teaching a student how to play ping-pong, we will teach him the strokes and the rules within the setting of an actual game, and we will try to relate certain features of the new game to the student's prior experience with tennis, assuming that he has had experience with that game. And when we help the student to develop this relationship, we will, of course, draw his attention to the differences as well as the similarities between the two games.

Plane geometry would make better sense if it were taught within the practical context of everyday life, instead of in the format of highly abstract theory, as at present. Few teachers of mathematics seem to be as willing and as able to break with tradition as was Harry G. Alway (1947), a San Diego high school teacher. Alway developed a curriculum based on the experiences of everyday life, including such diverse facets as navigation, race-track gambling, surveying, calendar construction, and superstition. At the end of the first year Alway found that his 120 students stood well above the national average on a standardized test in geometry and that none had failed. "However," he stated, "this situation seemed unimportant compared with the improved relations and improved mental health of all concerned."

One of the reasons why students have difficulty in transferring learning from the mathematics classroom to everyday life may be found in the kinds of problems presented in mathematics classes. Arthur P. Coladarci (1958) points out that problems presented in school and in textbooks all too frequently contain all the data required for their solution, but no data irrelevant to the solution. The problems with which life presents us, of course, contain many misleading and irrelevant cues. Thus it is hardly surprising that

students frequently are unable to apply the learning that they have so painfully learned in the classroom. Not only do we forget to teach them how to distinguish between relevant and irrelevant data, but we even forget to tell them that distinguishing between the relevant and the irrelevant is an important problem.

Levels of Aspiration. A few pages back we mentioned the importance of students' attitudes in connection with readiness for learning. Some of the more significant attitudes are centered around their expectations for success or failure in the learning to be attempted. In general, students who have experienced a fair amount of success—that is, who look upon themselves as generally successful—will approach new tasks with confidence, whereas students who have a history of frequent or chronic failure will tend to approach new tasks with negative or mixed feelings. Louis D. Cohen (1954) found that persons who were characterized by inadequacy, self-rejection, and inferiority tended to set goals for themselves that were very high or very low. Pauline S. Sears (1940) studied children in grades four through six, comparing the aspirations of those who had good school records with those who had poor ones. After she had given them a set of easy tasks involving school work, she told each child the score that he had made and asked him what he thought his score would be for the next task. Children who were successful in school tended to set goals that were reasonable and realistic, but children who had poor records were either overcautious, setting goals that were well below their present achievement, or were extravagantly optimistic, setting goals that were much higher than their observed level of accomplishment. There was also a tendency for generally successful children to attribute their successes or failures to their own efforts, whereas generally unsuccessful children tended to feel that success or failure was due to chance factors—to luck. The latter finding is in keeping with the study by Crandall and others (1965) that we mentioned a few pages back, in which children who took responsibility for their own successes and failures received better grades than those who shifted responsibility to their teachers or to environmental circumstances. Another study that confirms the finding of Sears was conducted by Robert W. Moulton (1965) of the University of California in Berkeley, who found that people who experienced success at their tasks usually raised the level of their aspiration for the next task, whereas those who failed tended to lower their aspiration. However, a few persons did the opposite. These perverse individuals tended to be the ones whose eagerness to avoid failure was much greater than their interest in succeeding. They were, one might say, "failure-oriented," rather than success-oriented. The failure-oriented individuals also tended to express a high degree of "test

anxiety" (see the following section) and scored low on need for achievement ($n\text{ Ach}$).

Elizabeth Douvan and Joseph Adelson (1958) studied the aspirations of adolescent boys, whose fathers were white-collar or skilled manual workers, in terms of the occupational status that they hoped to achieve as adults. The boys were then classified as "upward mobile" (expected to enter occupations whose status was higher than that achieved by their fathers), "stable" (expected to enter jobs with status equal to that of their fathers), and "downward mobile" (expected to enter jobs with status lower than that of their fathers). Douvan and Adelson were interested, among other things, in comparing the "energy level" of upward- and downward-mobile boys. Their data, briefly reported in Table 9-2, tend to support their hypothesis that upward-mobile boys have more energy than downward-mobile boys. The upward-mobile adolescent, as contrasted with his downward-mobile contemporary, is a member of more groups, engages in more leisure activities, is more likely

TABLE 9-2. Percentages of Adolescent Boys, Classified According to Direction of Mobility Aspiration, Who Reported Various Interests and Activities (Douvan and Adelson, 1958)

Interest or Activity	Direction of Mobility		
	Upward	Stable	Downward
1. Number of group memberships:			
none	25	33	52
one	32	38	22
two	23	20	17
three or more	20	9	9
2. Number of leisure activities:			
fewer than 20	52	65	67
20 or more	48	35	33
3. Dating	66	59	52
4. Leisure reading:			
do not read fiction	17	27	25
novels, mysteries	32	23	11
travel and adventure	32	20	18
technical, scientific	9	4	1
sports and hobbies	10	9	4
5. Proportion of activities enjoyed:			
fewer than half	45	41	59
half or more	55	59	41
6. Suggested additional activities they would like to attempt	63	31	10

to date, is more likely to read, enjoys activities more, and is more likely to suggest additional activities to be undertaken.

Anxiety as a Factor in Learning. Although the role played by anxiety in learning and in human behavior in general is only partly understood by psychologists, it probably is an important factor in reduced or unrealistic levels of aspiration. The person who is troubled by anxiety may feel powerless to cope with the demands being made on him by his teachers and consequently feels that whatever success results from his attempts at learning is more a matter of chance than the amount of effort he has invested. The unwillingness to elevate one's aspirations—to expect the best of oneself—may be due to anxieties about failure. In our culture we expect individuals to strive for ever higher levels of self-improvement, but we also are extremely critical of failure. Thus the inadequate student is in a "double bind"; if he attempts to achieve more, he runs the risk that he may fail and thus be disgraced; if he makes no attempt to achieve, he violates the ethic that requires constant self-improvement. In the long run, the learning situation seems bound to produce anxiety no matter what the learner does. In view of the fact that anxiety can and does interfere with learning, we might wonder how any learning takes place at all.

A partial answer to this dilemma lies in the fact that although anxiety might deter learning, it may also stimulate it. B. R. Bugelski (1956) maintains that attention is a primary factor in learning. Attention may result from any number of reasons—desire for reward, desire to escape punishment, curiosity—but basic to attention is anxiety. The task of the teacher, he suggests, is that of creating the necessary degree of anxiety. The problem of how much anxiety is a difficult one, because too much anxiety will create a need to avoid the learning situation and too little anxiety will result in a lack of attention. One way of creating the desired level of anxiety, Bugelski (1964) suggests, is by arousing the student's curiosity—because curiosity is a disguised form of anxiety. Children tend to be curious about forms of endeavor in which they have had some initial successes. Therefore, says Bugelski, make certain that the student's first experience in a new area is a successful one.

As we indicated in an earlier discussion, a great deal of learning takes place because individuals seek to avoid or reduce anxiety. This is particularly true of the learning that occurs within the context of social situations. Children learn to modify and control their behavior in order not to offend and disappoint parents, playmates, and other people who are important to them. Even those skills classified as "intellectual" are learned, at least in part, as a means of reducing or avoiding anxiety. In other words, many children learn to read partly because all their friends are learning to read

and they do not want to experience the anxiety of feeling different or left out of the group. Furthermore, their parents and teachers expect them to read, and they do not want to disappoint these powerful adults whose good will is so important to their well-being.

James B. Stroud (1946) holds that anxiety is a factor not only in learning to live with others but also in mental development generally.

We may assume that anxiety arises as a natural consequence of mental development—not as a biological unfolding, but as a process of learning and thinking.

The reactions toward pleasant and unpleasant consequences—reward and punishment—being what they are, it is inevitable that intelligent beings would develop some anxiety about them. Once the individual becomes concerned about the evaluation others place upon his conduct a new and vast field is opened up for the play of anxiety motives. Solicitation about social approval becomes the most pervasive of human motives. This source of motivation . . . may take precedence over the biological or primary motives. . . . Anxiety requires a certain amount of mental development through experience, a certain amount of insight. Socialized anxiety requires a consciousness of and concern about the evaluation of one's behavior by others.

Evidence along these lines is supplied by Elizabeth W. Amen and Nancy Renison (1954), who studied the relationship between play patterns and anxiety in young children. They report an increase in anxiety with the development of more mature play patterns.

Sarah G. Allison and Philip Ash (1951) experimented with the effect of anxiety on learning from films. They introduced an element of anxiety into a learning situation by telling students that the film and the test would prove whether they were good or poor learners, and that if students did not learn the material, it would prove they did not belong in college. They were also told, furthermore, that the scores of each student would be read aloud in class. The results indicated that raising the anxiety was accompanied by an improvement in the scores made on the test.

The anxiety that makes students receptive to learning is "normal anxiety"—the anxiety that also helps to promote the acquisition of social skills and the smoothing out of interpersonal relationships. Children who lack such anxiety are careless of the rights and feelings of others and are likely to ignore the long-range implications of their behavior. They tend to be self-centered, largely concerned with immediate satisfactions. "They want what they want when they want it." Most children learn to develop a degree of "normal anxiety" that has a socializing effect and that enables them to learn self-control and self-restraint, but a very few do not.

However, all children who display selfish and short-sighted behavior are

not necessarily devoid of anxiety. More than likely they are the victims of too much anxiety—"neurotic anxiety." Children who are troubled by an overabundance of anxiety have difficulty in making progress in learning tasks that are important or necessary if they are to meet their basic needs adequately and are to grow toward emotional, social, and intellectual maturity. Such anxiety, as we have noted previously, leads us to develop patterns of behavior that are not in our own best interests. For example, the student who takes an examination in a state of heightened anxiety is likely to misinterpret or misread test questions, forget important facts, and produce a test paper that does not reflect his true level of competence or ability.

What seems to stimulate the most effective learning is anxiety in the middle ranges. F. N. Cox (1960) administered tests of anxiety to fifth-grade boys in Melbourne, Australia, and divided them into three groups, representing high, middle, and low anxiety. The middle-anxiety group's academic performance was significantly better than that of the other two groups. The poorest performance was that of the high-anxiety group.

High levels of anxiety seem to be generally disabling. Seymour Sarason and his co-workers (1960) have developed an instrument to measure what he calls "test anxiety"—the kind of anxiety that prevents people from doing well in stress situations. Children scoring high on his Test Anxiety Scale tend to score low on intelligence and achievement tests. John F. Feldhusen and Herbert J. Klausmeier (1962) used another type of anxiety test, the Children's Manifest Anxiety Scale (CMAS) to explore the relationships among anxiety, intelligence, and achievement with children having low, average, and high IQs. They found that the lowest IQ group had the highest degree of anxiety. Anxiety scores were negatively correlated with IQ and achievement for the middle- and low-IQ groups; the correlations for the high-IQ group were approximately zero. Except for the high-IQ group, their findings paralleled those of Sarason and his associates.

Research with students at the college level shows that high levels of anxiety can interfere with academic performance even for students with above-average ability. Figure 9-3 shows that Duke University students scoring high on a measure of anxiety were much more inclined to drop out of school as academic failures than were students scoring low. Only the students at the highest level of academic ability seemed immune (Spielberger, 1962).

Other research in this field brings out some interesting if somewhat puzzling relationships between anxiety and learning. Apparently, a high level of anxiety aids the learning of simple material but interferes with the learning of complex material. Evan W. Pickrel (1958) found that persons scoring high on a test of "manifest anxiety" were able to solve problems with only a few

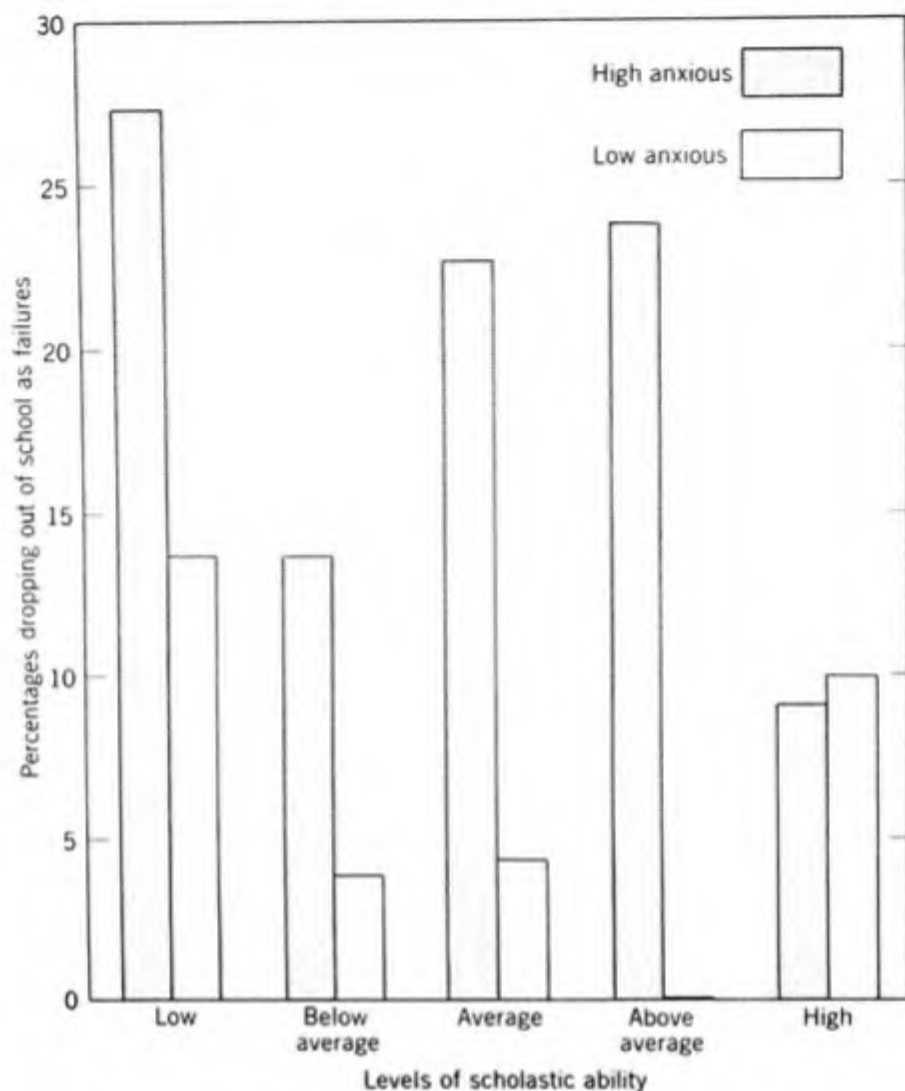


FIGURE 9-3. Percentages of high-anxious and low-anxious Duke University students dropping out of school as academic failures, classified according to five levels of scholastic ability. (Spielberger, 1962.)

have you...
 alternative solutions faster than a group scoring low on the same test. However, when the performance of the two groups was compared on a series of more complex tasks that involved a great number of alternatives, the "low-anxiety" subjects did better than the "high-anxiety" group. Evidence that high-anxiety individuals have more difficulty with complex material is also provided by research conducted by Sheldon J. Korchin and Seymour Levine (1957), who found that high-anxiety and low-anxiety subjects did equally well in learning simple word associations, but that low-anxiety subjects did better in learning a series of "false equations," a more complex kind of task. The difference in learning rate between the two groups is presented in Figure 9-4. David P. Ausubel and others (1953) reported that high-anxiety

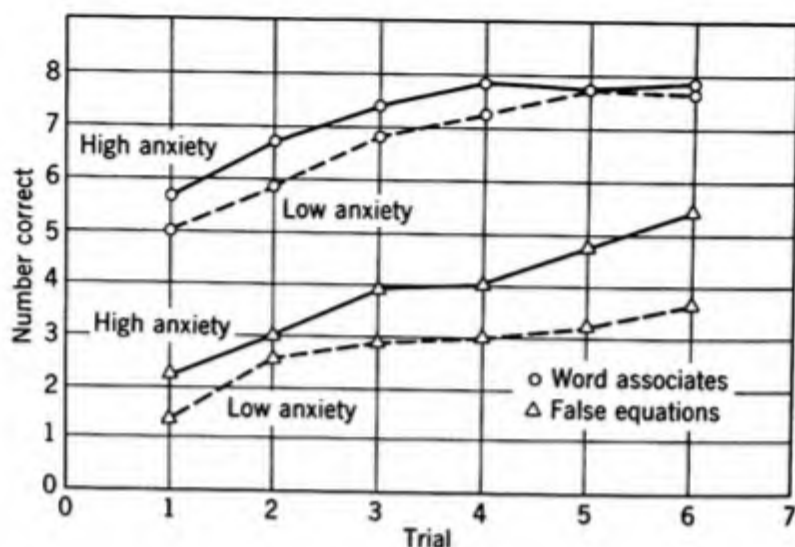


FIGURE 9-4. Learning curves of high-anxiety and low-anxiety subjects on word-association (easy) tasks and false-equation (difficult) tasks. (Korchin and Levin, 1957.)

persons were less able to learn than were low-anxiety persons, hence were less successful in learning complex and novel tasks. George Mandler and Seymour B. Sarason (1952) compared the abilities of high- and low-anxiety subjects with regard to learning a manipulative task. A high level of anxiety evidently interfered with the performance of the task during the initial stages of the learning period. As the experiment proceeded, however, the anxiety drive appeared to help the high-anxiety groups to improve their scores. Reporting of success or failure resulted in improvement in the scores of the low-anxiety group but depressed the scores of the high-anxiety group. There was greater variation in the scores made by high-anxiety individuals, indicating that anxiety is not a stable factor in learning but has differing effects on different individuals. In the study by Korchin and Levine, referred to above, high-anxiety subjects showed more variation in their performance than did low-anxiety subjects. Still another study that has implications for the problem of the effect of anxiety on learning is one conducted by Irving L. Janis and Seymour Feshbach (1953), who found that attempts to change the behavior of students by arousing fear produced fewer positive changes than did methods that were not fear-provoking.

What all this research means for the teacher is not easy to determine, partly because this area of human behavior has barely been touched by researchers. Apparently, if children are to learn, some minimal level of anxiety is desirable, but the teacher who continually finds it necessary to raise the anxiety level of his class may be creating more problems than he solves.

Although a minimum of anxiety appears to be desirable as a spur to

learning, most teaching problems stem from a superabundance of anxiety rather than a lack of it. There are many conditions in modern living that aggravate and intensify anxiety: the emphasis on competition, the importance of increasing one's social status, the separation of families, and the general inability that many people experience in trying to live according to their own ideals and standards. As parents and teachers develop increased feelings of anxiety as a result of these everyday pressures, they communicate these feelings to children. Some students are psychologically strong enough to resist the effects of an atmosphere that is laden with anxiety; others are not. The role of the teacher in dealing with the anxiety of the students in his classroom is a difficult one for a variety of reasons, not the least of which are his own problems of living in an age of anxiety. This is one reason why teaching makes such demands in the way of sensitivity to the needs and problems of students. The effective teacher is one who is able to sense the level of anxiety in his classroom and take steps to reduce it, make allowances for it, channel it into positive behavior, or perhaps even raise it somewhat, according to the needs of the moment.

SUMMARY

"Cognitive" refers to behavior in which there is a high degree of awareness, such as in thinking and problem solving. "Affective" refers to behavior that involves feelings, emotions, and attitudes. Both cognitive and affective factors enter into learning, and it is often difficult to distinguish between them. The need for attention, a relatively noncognitive factor, appears to have a decided influence on learning, although we tend to think of learning as a cognitive process. Recognition, attention, and encouragement as usually applied by teachers are forms of extrinsic rewards, which are not as effective as intrinsic rewards. The school situation contains many intrinsic rewards for the average middle-class student, but few such rewards for the lower-class student. One of the factors that interfere with our ability to help students find more intrinsic rewards in the learning situation is the necessity to provide education on a mass basis.

The content of school learning consists of skills, information, concepts, and attitudes. The traditional teacher is principally concerned with teaching skills and information, largely in isolation from one another. The conceptual approach emphasizes the interrelationship of learning. The difficulty is that students often do not see interrelationships that are readily apparent to teachers. What is needed are approaches that involve students more personally. The attitudinal approach appears to be basic to the teaching of skills, informa-

tion, and concepts, because it is concerned with relating material to be learned to the self-concept of the student. The teaching of attitudes requires, therefore, that the teacher concern himself with the needs, interests, and experiences of his students. The kinds of attitudes possessed or developed by students will affect their learning in highly significant ways. Because attitudes develop in relationship to group norms, the teaching of attitudes is largely a problem of dealing with the classroom group, rather than with individual students. Research shows that personality traits and patterns are related to varying degrees of success in different subject-matter fields. There are also a number of traits that are positively correlated with academic success in general.

Ideas about when students are ready for certain kinds of learning have undergone a change in recent years. Some experts claim that children at any stage of development can learn any concept in some appropriate form and that they can learn more efficiently than adults, but others dispute this contention. In general, learning proceeds more effectively if material is presented in meaningful wholes, rather than in unrelated parts. It is not always easy to determine what a "meaningful whole" is, because what is "meaningful" and "whole" for a teacher may not be "meaningful" and "whole" for a student.

Levels of aspiration have a great deal to do with a student's readiness for learning. Students with records of academic success tend to set their aspirations at realistic levels; unsuccessful students tend to set them too high or too low. Students with high levels of aspiration tend to have higher levels of energy than other students, as is evidenced by their interest in engaging in a wide variety of activities.

Apparently some degree of anxiety is needed for learning to take place. Although some research indicates that anxiety acts as a spur or drive that stimulates learning, other studies show that it has a highly variable effect and may even interfere if too high. Most teaching problems result from too much anxiety rather than from too little. Because anxiety is so much a part of everyday living, it is an ever-present factor in the classroom. Dealing with anxiety makes great demands on the professional skill of the teacher.

SUGGESTED PROBLEMS

1. When Ernie came home from school, he was almost bursting with wonderful news. Although he was only a first-grader, some of the second-grade boys had let him play marbles with them and had taken some time and trouble to teach him the rules of the game. In what way is Ernie's learn-

ing related to his basic needs? In what way might it also be the result of normal anxiety?

2. The statement endorsed by Bruner (1960) that children can learn any concept that adults can learn and also learn it more efficiently seems somewhat outrageous. It is easier to refute such a statement than support it. Nevertheless, there must be some basis for making this claim. What evidence can you find, based on your own experience and/or research data, which suggest that Bruner's contention may have some degree of validity?

3. In reading over the curriculum for the fifth grade, Miss Hartwick notes that she is expected to develop a unit on the voyages of Columbus sometime around Columbus Day, October 12. What are some of the things she can do to see that children develop desirable concepts and attitudes from this experience?

4. Dick is supposed to start his first year of Latin, now that he is a high school sophomore. However, you as the Latin teacher know that there is no point in his starting it if he is not "ready." How might you go about determining his readiness for Latin?

5. Sue is planning on going to Mexico next summer, so she has decided to learn to speak and read Spanish. She has copied a list of "Five Hundred Commonly Used Spanish Words" out of a grammar and is attempting to commit them to memory. What assumptions is she making about the nature of learning? What principles of learning is she observing or violating?

6. Ben makes the same mistake over and over in multiplying two or more digits, in spite of the fact that you have spent much time showing him how to do it correctly. He seems intelligent enough—he reads as well as the other children in the class. Without making any guesses for the moment as to his home background, what hypotheses might you develop about his learning problem?

7. Bill has trouble when he comes to bat at baseball. When he is off by himself, he can make nice clean wide swings, but when he comes to bat, he grasps the bat too close to the middle and makes a short, choppy swing that usually misses when it does not pop-fly the ball into the pitcher's waiting glove. How do you account for his inability to transfer his learning from the practice situation to the actual playing situation?

SUGGESTED READINGS

Bruner, J. S., *The process of education*. Cambridge: Harvard University Press, 1960. See the chapter on "readiness for learning," which contains his highly controversial proposals.

Educational Psychology in the Classroom

- Bugelski, B. R., *Psychology of learning*. New York: Holt, 1956. See especially Chapter 16, "Learning and education."
- Combs, A. W., ed., *Perceiving, behaving, becoming: a new focus for education*. Yearbook of the Association for Supervision and Curriculum Development of the National Education Association, 1962. A discussion of the phenomenological view of personality and its relationship to learning in and out of the classroom.
- Combs, A. W., and Snygg, D., *Individual behavior*, rev. ed. New York: Harper, 1959. See especially Chapter 10, "Learning, forgetting, and problem solving."
- Dewey, J., *Interest and effort in education*. Boston: Houghton Mifflin, 1913. A brief but penetrating treatment of the problem of motivation.
- Fullagar, W. A., Lewis, H. G., and Cumbee, C. F., eds., *Readings for educational psychology*. New York: Crowell, 1964. See the section on "concept formation and critical thinking."
- Growing up in an anxious age*. Yearbook of the Association for Supervision and Curriculum Development. Washington: National Education Assn., 1952.
- Kelley, E. C., and Rasey, M. I., *Education and the nature of man*. New York: Harper, 1952. The relationship between basic motivation and learning.
- Kubie, L. S., *Neurotic distortion of the creative process*. Lawrence: University of Kansas Press, 1958. A provocative discussion of some of the emotional blocks to mental functioning.
- Phillips, B. N., Duke, R. L., and DeValut, M. V., eds., *Psychology at work in the elementary classroom*. New York: Harper, 1960. The second section deals with pupil behavior and learning.
- Prescott, D. A., *Emotion and the educative process*. Washington: American Council on Education, 1938.
- Russell, D. H., *Children's thinking*. Boston: Ginn, 1956. Chapter 6 deals with the role of emotions and attitudes in thinking.
- Sarason, S. B., et al., *Anxiety in elementary school children*. New York: Wiley, 1960. A report of a series of research studies conducted over a period of six years at Yale University.

10 Problems of Management in Classroom Learning

and Their Numerals

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In this chapter and Chapter 11 we discuss the learning situation primarily in terms of things done by teachers to manage, direct, and control students; in Chapter 12 we take up procedures in which students have more autonomy and in which teacher direction and control are minimized. In making this distinction we are not trying to create a "black-and-white" contrast between the two approaches, for the differences are likely to be relative, rather than absolute. We shall be somewhat critical about teacher domination of the learning situation, partly because teachers are inclined to provide more direction and control than students need, and partly because certain important kinds of learning can be accomplished more effectively when students have a greater degree of autonomy.

Importance of the Teacher. In our previous discussions of the part that teachers play in the learning process, we have made a number of statements that may appear to diminish the importance of their roles. We have said, for example, that much of the learning that takes place in the classroom occurs in spite of the teacher, rather than because of him; we have indicated that most of what students learn is learned outside the school; and we have pointed out that teachers cannot force unwilling students to learn. What we have been trying to do is to place the student at the center of the educational picture, where he functionally belongs. The traditionalist critics of modern education become anxious and hostile at any indication of a change-over to student-centered practices, preferring to see the teacher as the central person in the educational process.

There are some good arguments for focusing attention on the teacher and his role. One of the chief reasons for the very existence of the schools is our general concern that the knowledge and values of our civilization be transmitted to the younger generation. The teacher becomes a key figure in this concern: he is, in effect, the representative of society who has been charged

Educational Psychology in the Classroom

with the transmittal of this knowledge and these values. The members of adult society can identify more readily with the teacher than they can with the students. After all, the teacher is an adult member of society and understands better than students do what the objectives of education are. Furthermore, even though ours is a democratic society, we still retain the authoritarian pyramid type of organizational structure, a format which places the leader at the top of a "pyramid" of followers. This arrangement is one that makes the leader more important and more attractive, in a psychological sense, than any of his followers. This format has come down to us from primitive times and is used in businesses, governmental agencies, religious organizations, and so forth. Still another reason for teacher-centered attitudes is a personal one: each of us is bound to think of himself as the center of his personal universe. Consequently, it is natural for the teacher to think of himself as the center of the educational picture, even though he may stoutly maintain: "The students come first."

There is no doubt that the teacher has a profound influence on the learning that takes place in the classroom. In our discussion of social climates in



"I'll bet he couldn't control a sixth grade classroom."

L. H. Russell, *NEA Journal*. (Reproduced by permission.)

There is more to classroom management than the will to dominate and the right to punish.

Chapter 4, we cited research by Lewin, Lippitt, and White (1939) that demonstrated how the behavior of a group of children can be modified in very consistent ways by the kind of leadership they receive from the adult in charge. The teacher's personality is also a factor in the kind of climate he creates in the classroom. Morris L. Cogan (1954) surveyed junior high school students in 33 different classrooms and found a significant and positive relationship between the warmth and friendliness of the teacher and the amount of work, both self-initiated and required, done by students. Cogan considered the amount of self-initiated work performed by a student as an index to the degree of similarity between his values and those of the teacher. When students undertake self-initiated work, they are in effect adopting the teacher's values as their own. The importance of getting students to do this is demonstrated by a study by Haron J. Battle (1958), who compared the personal values of six high school teachers and their 48 students. He found that students with the highest achievement had attitudes and values more like those of their teachers, whereas students with low achievement had attitudes and values that differed.

Some of the more effective ways in which teachers manage and direct the learning experiences of their students are suggested by the two following studies. James J. Gallagher and Mary Jane M. Aschner (1963) recorded on tape five consecutive classroom sessions for twelve high-IQ classes. Analyses of the recorded interaction between teachers and students showed that teachers were able to stimulate creative thinking in students by asking questions which could not be answered by specific information or by "what the book says," but which encouraged speculation, guessing, and exploration of ideas. The second study, conducted by Howard Rosenfeld and Alvin Zander (1961) of the University of Michigan, was concerned with the influence of teachers on aspirations of students. They found that students tended to be influenced favorably by the willingness of teachers to reward, but particularly when such rewards were assigned as a result of students having done their best and not in any indiscriminate or random manner. Attempts to coerce through disapproval had no influence even if they were related to the students' performance and actually lowered their aspirations when administered on an indiscriminate basis—that is, when the teacher expressed disapproval without specific cause. Students who perceived a teacher's grades as fair and accurate were also more likely to be influenced by him.

Such studies show that there is a strong case for people who think of the teacher as being the prime mover in the educational process. Learning takes place because he "does something," and if he "does nothing," presumably no learning would take place at all.

Educational Psychology in the Classroom

One of the weaknesses of this approach to the teaching-learning process, however, is that it invites us to magnify the importance of the teacher and to minimize the importance of the learner. A teacher-centered approach to teaching-learning leads the teacher to become preoccupied with what he does or is going to do, and to be only minimally concerned with students' learning problems or how their behavior could be modified to encourage more effective learning. Traditionalists tend to be preoccupied with *teaching* rather than with *learning*. This makes for a *closed* system: as long as a properly educated teacher is in charge, the problem of providing adequate education for youth has been solved and no further questions can be raised. The approach of the educational psychologist is that of keeping the question of education *open* for further investigation. The educational psychologist, being concerned primarily with learning, is continually raising questions as to the kind and amount of learning that is taking place and even whether *any* learning is taking place. The modern teacher or educational administrator, taking his cue from the psychologist, is continually raising questions about learning: whether it is taking place, how much and what kind is taking place, whether it can be improved and facilitated by different teaching methods, and so forth. Continual inquiry of this sort requires an open situation—one that can be explored and investigated at any time. It is this concern about learning that leads the psychologist and the educator of today to center their concern on the learner. Teachers and teaching are a matter of concern only to the extent that they affect learning. There is, furthermore, a considerable body of research that indicates that learning proceeds more effectively if the learner takes a major share of the responsibility for his own learning and participates actively in the making of decisions about his own learning. We shall be reviewing some of this research in this and subsequent chapters. This approach is quite different from the educational arrangement preferred by the traditionalists, in which the responsibility for learning and for making decisions about learning is entirely in the hands of the teacher.

None of this shift in emphasis means that the teacher is in danger of becoming an unimportant figure in the modern educational scene. As we have tried to show, he is a very powerful figure because he has the ability to stimulate or prevent learning. The problem is not that of finding ways to restrict, harass, or eliminate the teacher, but that of finding ways whereby he can become more effective.

Children's Behavior and Adult Standards. The teacher-centered classroom is the target of still another kind of concern. In former years childhood was considered to be an awkward stage of development, having little of interest or value in its own right. The sooner children grew out of their childishness

and learned to conform to adult standards, the better. We would be less than honest if we said that such motives do not exist today. There is no denying that children behave in ways that interfere with the lives of their parents. They are unable to participate in adult activities; hence parents must either give up some of their favorite pastimes or arrange for child care. The fact that children need supervision and make frequent demands for love and attention also distracts parents from other duties and responsibilities. Very often children display behavior that is annoying, embarrassing, and antisocial. Hence we cannot blame parents for looking upon the school partly as a custodial institution and partly as a place where they hope children will learn to behave more in accordance with adult standards—a kind of behavior that the home has failed to produce. The teacher is naturally expected to play a key role in providing these services.

Although today we are much less inclined than, say, our Colonial forbears to insist that children conform strictly to adult standards of behavior, we have by no means given up the idea entirely. To be sure, most parents and teachers today know that it is unrealistic to expect children in primary grades to sit still for long periods of time without wiggling, to display perfect manners while eating, and to refrain from noisy, exuberant play. When we read the rules for conduct in the school manuals of bygone days, we smile at their naïveté and commend ourselves for having a superior understanding of the needs of children. However, even though we know that it is unrealistic and even unwise to expect or demand adult conduct from children, we really would like to have them behave more like adults than we are perhaps willing to admit. We say to ourselves, in effect: "I know it is too much to expect Willie to sit through church service without wiggling, but it would be very nice if he would, just the same!" On the one hand, we can recognize that children are bound to behave like children, but on the other hand, we wish they would behave more like adults.

This wistful longing for evidences of adulthood in children has much deeper roots than we are ordinarily aware of. It appears, for example, in the insistence that all children be ready to read on entering the first grade, an approach that overlooks the fact that some children are not ready, physically, emotionally, and intellectually, until they are seven or eight. It also appears in our impatience and irritation at the inconsistencies of adolescent behavior, in our unwillingness to let them learn through the normal process of making some mistakes.

Difficulties in Being Objective about the Behavior of Children and Youth. Although we have come to a point in the development of our culture where we are willing to grant that the needs, interests, and problems of children

and youth are of a somewhat different order than those of adults and that adult behavior cannot routinely be expected of them, most people are not yet ready to agree that these needs, interests, and problems should be a major consideration in the planning of school curricula. Even when we say that we are adapting curricula and developing teaching methods in consideration of the needs of children and youth, we are prone to overlook the possibility that our concepts of their needs may be quite different from the needs that they perceive, for we tend to confuse *psychological* with *normative* needs (see Chapter 2). In other words, without being aware of it, we are interpreting our observations of the behavior of children and youth to mean that they should have the kind of educational experiences *we* think are necessary. Thus a specialist in foreign languages might decide that the inability of America's representatives abroad to converse in any other language than English means that children "need" to begin the study of foreign languages earlier than they ordinarily do. Or a county grand jury studying the increase in juvenile delinquency may conclude that what some high school students "need" more than anything else is to attend a special class for disciplinary cases. In both situations, adults have come to their conclusions with honesty and sincerity, but instead of reporting children's needs *as experienced by children*, they have instead given us an *adult interpretation* of children's needs. To be sure, any interpretation that an adult makes of children's needs is going to be colored by some kind of bias, even if the adult is a child psychologist, and the task of keeping this bias at a minimum is always with us. However, it *is* possible to test the validity of our findings by discussing them with trained and experienced observers and by testing them through research.

It is also difficult for us to grasp the idea that the behavior that is common or widespread among children and youth at certain levels of development is mature or appropriate for that age. For instance, the hostile and rebellious behavior that preadolescents often display is likely to upset parents, teachers, and other adults who work with them. Compared to adult standards, such behavior seems immature. We are therefore inclined to increase pressures and demands for adult behavior rather arbitrarily, without consideration of the basis for the behavior, the children's level of maturity, and their psychological needs. This does not mean that we should ignore their behavior or that we should make no demands at all, but it does mean that we should attempt to understand the preadolescent and his needs so that we can make demands or provide freedom more appropriately.

Our ability to deal sensibly with preadolescent and other forms of child behavior is blocked by our feeling that somehow the behavior that is typical of children is not as good—even for children—as adult behavior. According

to our scale of values, "childish" behavior is generally undesirable, and "adult" behavior is what we want to encourage. We are therefore inclined to push children and youth along through their various stages of development, often faster than it is wise for them to proceed. It is therefore not surprising that many young people resist and resent such pressure and react by refusing to behave as expected. Much of the problem behavior that plagues teachers and parents is the result of their attempt to enforce standards of behavior that are unrealistic in the light of the child's level of maturity.

The problem of resistance to classroom learning takes on certain aspects of group phenomenon from the upper elementary grades onward through college. David Riesman speaks of the way in which students defend themselves against teachers' demands by setting norms or standards that determine how much a student can learn or the extent to which he can cooperate with teachers without being considered a "teacher's pet," a "ratebuster," or a "square." He points out that many students are on guard constantly against being "sold" by a teacher on the value of a concept or of a subject. Such students see a danger in liking a teacher too much or becoming close to him in any way, because such a relationship makes it difficult to resist the demands and expectations for learning that teachers are likely to make. The better the teacher, the more apprehensive students are, says Riesman, because an effective teacher is likely to make more demands on students and thus make it difficult for them to resist learning (Riesman, Jacob, and Sanford, 1959). Some research by Ned A. Flanders and Sulo Havumaki (1960) supports the idea that teachers can be influential by using the "divide-and-conquer" technique, but such an approach runs the risk of building up greater resistance. In many classrooms a kind of vicious circle of interaction develops, in which a dominant, friendly, and successfully influential teacher focuses on a few individual students, achieves some successes, and feels rewarded. But when resistance starts to build up in the class, the teacher is likely to become somewhat less friendly and assert his authority. This, in turn, increases the resistance of the class.

Although resistance to learning is an immature form of behavior, in the sense that it operates to inhibit students' intellectual growth and development, it is nevertheless a very real factor in the relationship between teacher and student, particularly from adolescence onward. Ordinarily, when teachers encounter the negative attitudes that characterize resistance, they are likely to take them personally, not recognizing that they are a natural outgrowth of the kind of relationship that has developed between adults and adolescents in our society. Such attitudes constitute a problem that must be understood and dealt with objectively as a way of facilitating the learning process, just

like any other problem that is characteristic of the stage of development the learner is going through.

Another reason why we have difficulty in creating the kinds of school experiences that will help children learn is our anxious fear that children may not learn what they are supposed to be learning. Instead of attempting to create situations that will enable children to find answers for themselves and do their own learning, we are likely to arrange situations that will give us the feeling of directing and controlling learning and of *making sure* that children are learning what they are supposed to be learning. We become anxiously preoccupied with the responsibility centered in us as teachers, hence are not inclined to share any of it with students, forgetting that we cannot learn *for* them. If a student learns anything, it is because he has taken some initiative and responsibility and has learned it for himself. Learning is a very personal experience. We cannot therefore "give" this experience to a student. The realization of this basic principle led Carl Rogers (1961*b*) to deliver a provocative paper, in which he questioned whether, in the final analysis, we can actually teach *anyone* anything of importance. He said: "I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning." The feeling that Rogers expressed seems to be far removed from the prevailing educational practice, yet it appears to be in harmony with much of the current thinking on learning, particularly that of the phenomenological group. Nathaniel Cantor (1946) says: "All genuine learning, in the final analysis, is self-education."

Teacher Direction and Control of Learning. The fear that students will not learn unless prodded, the show of resistance that many students put up against meeting teachers' demands, the feeling that children should be made to conform to adult standards of behavior as early as possible, and tendencies to interpret the needs of children and youth in the light of adult needs—all of these are factors that have operated to produce classrooms that even today are largely teacher-centered and teacher-dominated. This means that decisions about the content to be learned and the way it is to be presented are made in reference to the interests, hopes, expectations, feelings, and attitudes of teachers, rather than those of learners. This is not to say that this bias against students' needs is deliberate and intentional. Some of it is due to the fact that we are only just beginning to understand the motivation and feelings of children and youth, and some of it occurs because of a rather natural tendency to interpret whatever we see in the light of our own needs. There is also a tendency for some teachers to become involved in the details of management and control of the classroom as a protection against getting personally involved in the teaching-learning process. Such teachers, of course,

run the risk of being perceived by their students as being cool and aloof (Wallen, Travers, Reid, and Wodtke, 1963).

However, irrespective of *why* classrooms are more or less teacher-centered and teacher-dominated, the fact that they tend to be so oriented raises the question of what effect this has on learning. Is it desirable to have all learning activities directed and controlled—*guided*, that is—by the teacher?

After reviewing relevant research, B. R. Bugelski (1956) came to the conclusion that learning cannot occur by guidance alone. Guidance, it appears, may help if given early and in small doses, but generally not in the initial phase of learning. If guidance is given when learning is well underway, it may even be harmful. The chief difficulty with guidance is that it prevents the learner from making errors. The making of errors is a very important part of the learning process, because it is through making errors that the learner learns how to avoid making them. In teaching a child to skate or to ride a bicycle, Bugelski says, it is important that the child be allowed to fall. He should be protected from injury, of course, but the process of falling should occur, at least to some degree. It is only by experiencing the process of falling that the child can discover what leads to falling and how falling can be



Zora Castagnoli

The highest degree of personal involvement in the learning process is achieved when students are free to work out their own ways of dealing with learning tasks.

avoided. The research by Bert Y. Kersh (1962) we referred to in a previous chapter also provides insights into the value of avoiding excessive guidance in learning. Kersh found that learners who used the method of independent discovery obtained results superior to those obtained by learners who had been told what principle to use in the problems they had been assigned. He concluded that as learners are thrown on their own, they become more motivated to continue the learning process or to continue practicing the skill they had learned.

Another term for guidance of learning processes is "manipulation." The teacher who is taking full charge of a learning situation will manipulate the learner and the situation in an attempt to produce the desired learning. Manipulation implies maneuvering, direction, and control and is contrasted with methods that allow the learner the maximum in freedom and self-direction. It may be argued that some manipulation is necessary to arrange the learning situation and to bring the learner face to face with stimulating problems. The difficulty appears to be, therefore, in the amount and kind of manipulation that is exercised. An example of a relatively nonmanipulative approach to teaching is provided by a personal experience of D. O. Hebb (1955), an outstanding experimental psychologist, who at one time was an elementary school teacher. Hebb sent all children who did not care to attend to their assigned lessons out to play. The students thus released from studies were not allowed to do homework or to engage in any kind of educational activity. The students eventually rebelled and demanded homework, insisted on studying and completing assignments, and refused opportunities to play.

The extent to which a teacher dominates a classroom will be revealed, in part, by the methods he uses. In a teacher-centered classroom, the teacher does most of the talking, because what he has to say is considered more vital than anything the students might say. In such a classroom, it is the students' duty to listen to what the teacher has to say, commit it to memory, and repeat it on command during recitation periods or in examination papers. Skills are taught by the teacher's telling, describing, demonstrating, and explaining the desired technique in a step-by-step fashion, whereupon he directs students in their attempts to master the techniques by drill, practice, and recitation. To be sure, today's practice materials are more ingenious, more interesting, and more readable than they were a generation ago, but the principle remains much the same.

In some respects, the idea that lies behind drill and recitation appears to be a sound one—the idea that the repetition of proper responses tends to promote and reinforce learning. It *would* appear that if the teacher repeated the word "guest" to the class and had them spell "g-u-e-s-t" over and over,

they should be able to reproduce the proper spelling on demand at a later time. However, whether students actually are able to show evidences of learning after such experience depends on many variables. It depends on whether the students see the task as worth doing, whether they understand why the word is spelled as it is (what is the function of the "u," for example), whether the word is one they would be likely to use in the writing they will be doing, and so forth. Other important variables are their feeling toward spelling, toward school, toward education, toward adults, and toward this particular teacher. The mere repetition of correct responses may enhance learning, but it may also interfere with learning.

Teachers sometimes defend the amount of manipulation and guidance they provide on the grounds that it is their job to "help" the student. However, as Arthur W. Combs (1965) points out, what makes the difference between good and poor teachers is not so much the kinds of activities they undertake, inasmuch as lists of what such teachers do have not been found to be very good indices to teacher competence. Nor is it knowledge of what a helping relationship should be, because good and poor teachers are equally able to describe the characteristics of teachers who are genuinely helpful and those whose intervention actually interferes with learning. Combs says that what *does* seem to make the difference are the attitudes, feelings, purposes, and conceptions of self, for it is in these respects that helpers differ from nonhelpers. Evidently, it is not so much *what* is done, but *how* it is done and *why* it is done.

In all fairness, the conditions under which most teaching takes place tend to foster teacher domination and intervention, rather than the development of a genuine helping relationship. Teachers not only operate in a climate of community opinion that expects them to dominate the classroom, but they also are required to dispense learning on a mass basis to classes of twenty-five, thirty-five, and even forty-five students or more. Under such conditions, a great deal of the time and energy of the teacher is taken up with the mechanics of organization, direction, and control. Furthermore, it is difficult, under such distracting circumstances, for the teacher to direct his attention to studying the psychological needs of individual students or of the classroom group. However, the more basic reasons why teachers tend to avoid the use of student-centered approaches are that they are psychologically and emotionally unprepared for such methods and receive all too little support and encouragement to develop their thinking in this direction.

The Problem of Homework. Another form of teacher-centered or, more accurately, *adult-centered* methodology is the assignment of homework. There are at least two major arguments for the assignment of homework. One is

that there is insufficient time in the school day for students to learn what they need to know, and the other is that if learning is to be worthwhile, it should not be confined merely to the hours students spend in the classroom. Both of these arguments assume that subject matter assigned as homework is important and worth learning. However, this is an adult point of view. Students may not see homework as very important at all and may resent it as another of the devices used by adults to keep students from doing what they want to do. Some students do their homework for largely negative reasons—to keep adults from nagging them about it. Other students do the work more or less willingly because they like or admire their teachers or are interested in the subject matter. However, a great many students do a poor-to-mediocre job because they fail to see why the tasks assigned to them are of very much importance.

One of the characteristics of students who are vitally interested in a school subject is their willingness to spend a great deal of time on their own exploring and studying related material. Some of their most successful learning experiences will thus occur outside of class when they are pursuing their studies on their own. However, because doing work outside of class is one of the earmarks of the highly motivated, eager student, this does not mean that we can get the same kind of results by *requiring* students to do homework. On the other hand, the student who does not study outside of class is probably doing very little real learning in the classroom. The dilemma here is how to get students to undertake out-of-class activities that will support classroom learning and still not arouse rebelliousness or stifle any interest they may have in learning.

The evidence of the value of homework is conflicting. One fairly extensive study of teaching methods in high school mathematics showed that there was no significant relationship between achievement in algebra and geometry and the amount of homework that was assigned (Schunert, 1951). P. J. Napoli (1937) was unable to find any data favoring the assignment of homework in the elementary school, but a study by William A. Anderson (1946) showed that when homework was appropriately and carefully assigned, students showed improvement. Ruth Strang (1937) reported that there was practically no relation between the amount of time spent in studying and the academic marks received by high school students.

In general, parents appear to approve of homework. Some parents go so far as to demand that teachers assign homework to all children, even in the primary grades. When children have no homework to do, parents wonder whether the school is doing an adequate job. Some of them doubt whether it is wise for children to have so much free time.

Many parents use homework as a device to control the conduct of their children. Let us say that Lucy asks to watch television for the third evening in a week. The parent could say: "No, you may not. I don't like the programs you are watching, and besides, I think you spend too much time watching television." Such a refusal would only precipitate an argument, and perhaps the parent is weary of arguing with an adolescent who always objects: "I don't see why I can't do it, all the other kids can. It just isn't fair!" It is much easier to say, instead: "Have you done your homework, Lucy? You'll never be able to go on to college if you don't start getting better grades, you know. I think you better spend the evening going over your algebra." Thus the parent is able to say "no" without taking full responsibility. In effect, the parent is pretending that he would permit Lucy to watch television if the school had not required all this homework. Hence the teacher unwittingly plays the part of an accomplice in a conspiracy to keep the child under control and thus replaces the parent as a target for the child's hostility. There is no doubt that children and adolescents need direction and control at times, but the question here is whether students' attitudes toward school, which in all too many instances are negative and hostile, are improved when parents use homework as a device to keep children from doing things they enjoy.

Still another problem is the failure of many teachers to help children understand the purpose of assignments. Without such understanding, homework becomes merely another chore, without rhyme or reason, autocratically imposed by unsympathetic and demanding adults. On the other hand, assignments can be developed within the setting of a stimulating learning experience, building on the interests and experience displayed by children. One assignment that suggests itself with respect to the learning of decimals is the computation of batting averages of major league baseball players, or, better still, of the baseball players in the class. Such an assignment might mean that some teachers would have to learn as much about baseball as the students are expected to learn about decimals.

The Problem of Examinations. The time-honored custom of giving examinations is another teaching device that operates all too often to meet the needs of the teacher rather than the needs of the student. Examinations, tests, and quizzes have an important place in the learning situation. They offer children opportunities to review what they have learned and to find out how much progress they have made. When tests are used with such purposes in mind, they can be very helpful as aids to learning. Indeed, research indicates that learning is more effective when material that has been learned is reviewed at intervals, and students who have opportunities to find

out what progress they are making generally learn more effectively than those from whom this information is withheld.

The difficulty is that we do not use tests solely as aids to learning, but use them instead as a way of ranking students and of making decisions with regard to success and failure. Thus many a student comes to look upon a test not as a means of finding out what progress he has made but as an instrument that may cause him to fail. Very likely much of the anxiety that students feel with regard to examinations is related to this fear of failure and feelings of inadequacy. As the student realizes that he is being judged by the results of the test and that decisions as to whether he has succeeded or failed may be made on his performance, the test may grow in importance for him. But the importance of the test stems from its ability to produce fear and anxiety, not from its usefulness as a learning instrument. Because tests are used more generally to assist adults in making decisions about children than as aids in learning, we are including them among the teacher-oriented techniques.

Like all forms of interaction between teacher and student, tests and examinations are a form of communication. Some degree of normal anxiety is perhaps needed to get the attention of the learner, but a common procedure is to inflate test-oriented anxiety out of all proportion, with the result that communication and thought processes become impaired. Thus the marks that students receive on tests are to a large degree a function of their ability to withstand stress and anxiety, whereas they ought to be an index to progress in learning. Examinations cause anxiety, too, because educational practices are, as Rudolf Dreikurs (1958) points out, largely mistake-centered. A great deal of the time and energy of the teacher is spent in preventing or correcting mistakes, and tests play a large part in his self-perceived function as a corrector of mistakes. Perhaps part of the preoccupation of teachers with mistakes comes about because teachers as a group tend to be very critical of themselves. Furthermore, they are in a profession that is exposed more than any other to public scrutiny and criticism. It is therefore understandable why they might be inclined to pass on some of the burden of this criticism to the students in their classes.

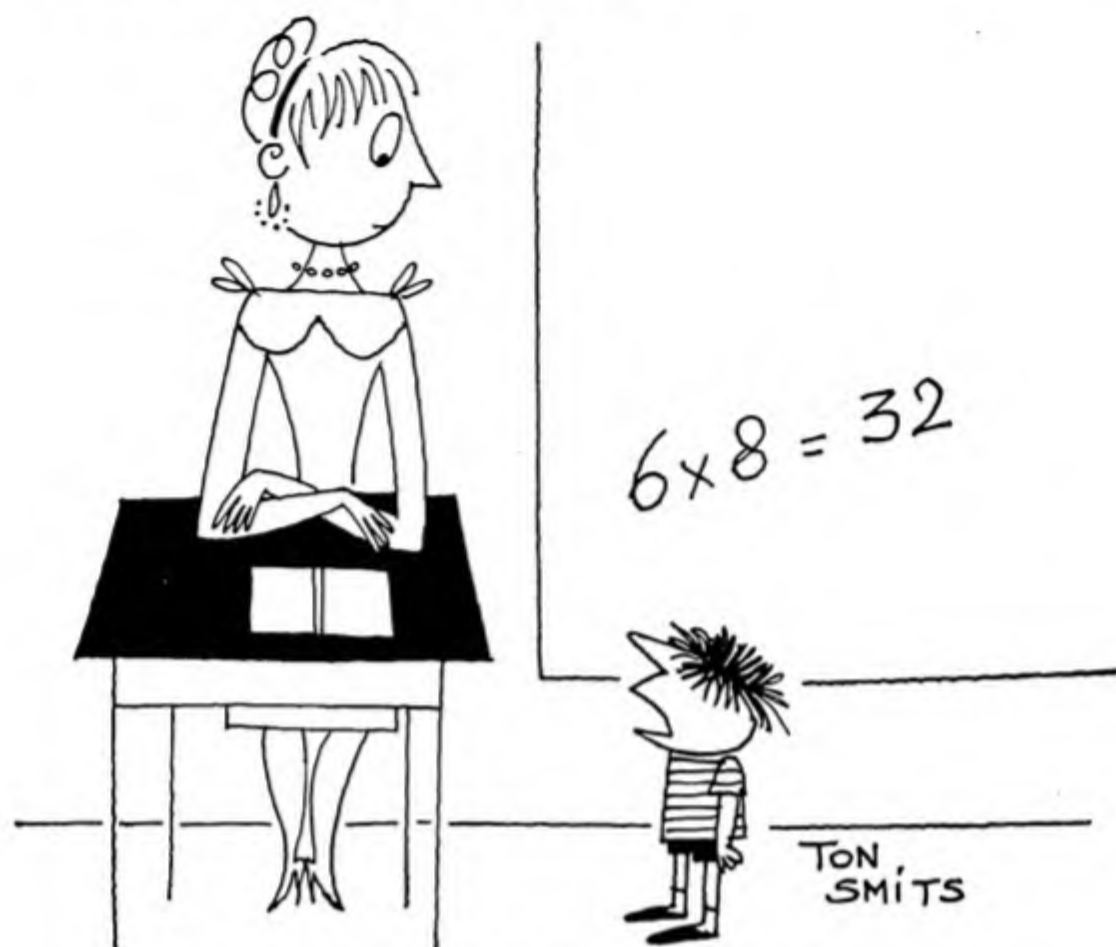
The greater the stress placed by teachers on tests and examinations and the greater the disgrace attached to mistakes, the greater the fear and anxiety that students are likely to develop. A natural consequence of this fear and anxiety is a lowering of moral standards. In Chapter 6 we mentioned research with college students showing that the courses in which the highest proportion of failing grades and the lowest proportion of superior grades

occurred were also the ones in which most cheating occurred. When William J. Lodge (1951) conducted a survey of educational practices, he found excessive cheating to be the norm in classrooms where teachers were coldly formal and autocratic, whereas friendly, democratic classrooms were characterized by less cheating. He concluded that cheating was symptomatic of poor morale, caused at least in part by practices characteristic of teacher-centered, teacher-oriented classrooms.

Teacher-Centered versus Group-Centered Methods. The real test of any form of educational methodology is its ability to produce results in the form of behavior changes in students. Thomas F. Stovall (1958) reviewed twenty-seven different studies that compared the results obtained with the lecture method (teacher-centered) with those obtained by the group-discussion method (group-centered). In general, the studies seemed to indicate a slight advantage for the lecture method when it came to mastery of factual material, but discussion was superior as a means of stimulating critical thinking and of aiding students in the attainment of a deeper understanding of subject matter, as reflected in the ability to make applications of newly acquired knowledge, to interpret, and to draw inferences. Furthermore, discussion had a greater effect on students' attitudes and values, as well as on their subsequent behavior.

The superiority of the discussion method in bringing about actual changes in subsequent behavior has been demonstrated in a number of studies reported by Kurt Lewin (1958) and concerned with such problems as getting housewives to use cheaper cuts of meat (during the shortages of World War II), to give their children more milk, and to give their babies orange juice and cod liver oil. Mothers who participated in group discussions were far more likely to carry out the suggested changes in diet than were mothers who listened to lectures given by experts. In one study, mothers who received twenty-five minutes of *individual personal instruction* in the use of cod liver oil for their babies were less likely to follow out the suggestions of the expert than were mothers who participated in a twenty-five-minute group discussion of the problem. Betty Wells Bond (1956) also compared the value of lectures and group discussions in bringing about long-term changes in health practices relating to early detection of cancer. A follow-up thirteen months later showed that the group-discussion method was the more effective of the two approaches.

Ned A. Flanders (1960) conducted an extensive study of seventh- and eighth-grade students in social studies and geometry and found the best achievement in classes where teachers talked less, encouraged student par-



"You mean all your teaching didn't do any good?"

Ton Smits, *The Saturday Review*. (Reproduced by permission.)

When teachers take responsibility for students' learning, they should not be surprised if students blame them, instead of themselves, for failures.

ticipation, and accepted student ideas. Betty Schantz (1963) obtained similar results with high-ability fourth-grade children studying science.

It is interesting to note that Lewin found group discussion more effective than individual instruction. Teachers sometimes feel that if they could teach each child separately, away from the distractions of the classroom, many of the problems of instruction could be solved. However, the studies reported above demonstrate that something happens in a group discussion that has a greater impact on subsequent behavior than information transmitted by individual instruction or by lecture.¹ This does not mean, of course, that groups of students can be easily manipulated into making any kind of de-

¹ Perhaps individual instruction may have special merit in the teaching of skills, but group discussion appears to have greater value when it comes to changing attitudes and behavior.

cision desired by the teacher. An important characteristic of the group-discussion method used by Lewin is that participants were free to determine whether they would actually change their behavior.

At first thought, it would seem such procedures could not be transferred to the classroom, because few teachers would be able to accept the idea that students should decide whether they will learn or what they will learn. However, in the final analysis, students make this decision anyhow, consciously or unconsciously, even in the most autocratic of classrooms. Try as we may, we cannot *force* an unwilling learner to learn. We can make him go through the motions or even make him memorize the material we have prescribed, but we cannot force him to apply it to situations outside the classroom or to remember it after he leaves us. Hence, the only thing we can attain by force or coercion is the mere shadow of learning, not any real change in behavior, self-concept, or experience.

Results of Teacher Domination. Fortunately, most children are interested in learning, and, under normal conditions, relatively little prodding is needed for them to undertake the really important tasks that are basic to more mature forms of behavior. Nevertheless, when teachers dominate and control the learning situation more than is necessary, there is a tendency for students to become apathetic, to lose interest in learning, and to do only what is required of them. They complete the minimum requirements not because they see them as basic to their developing maturity, but because they wish to avoid the disapproval of teachers and parents. When the learning situation is teacher-dominated and teacher-oriented, most students do learn how to conform, obey, and follow directions, but they are less likely to learn how to apply classroom skills to the problems of daily life they encounter outside the classroom or will meet as adults. Teacher-dominated learning also tends to stifle creativity and spontaneity and acts to prevent the development of behavior that is self-directive—that is, behavior related to the making of decisions by and for oneself, an important kind of behavior for responsible citizens.

Harold H. Anderson and his associates (1945, 1946) conducted an extended investigation of the personalities of two second-grade teachers and the differences in their classrooms. One teacher tended to dominate classroom activities; the other had a relationship with her pupils that was characterized by democratic attitudes, attitudes that were described by the researchers as "integrative." Children who worked with the integrative teacher were less inclined to look up while doing seat work, there was less playing with stray objects, and their behavior was characterized by greater spontaneity and initiative. The attitudes and behavior of the dominative teacher tended to

develop resistance in some children and conformity in others. She tended to use techniques that could be expected to stifle spontaneity and to intensify conflict and misunderstanding. A follow-up study was conducted a year later when the two teachers had different classes. The same relationships were observed, indicating the tendency of personality characteristics to be relatively stable. When two third-grade teachers who had similarly contrasting personalities were compared, the same general observations held true.

An interesting study was conducted in French elementary schools by Georges G. Mialaret (1956), who compared traditional, teacher-centered methods with more psychologically oriented approaches. Even when traditional methods were used to the satisfaction of judges who were biased in favor of that method, students showed little ability to make application or to transfer what they had learned. Such results are not surprising in view of the fact that traditionally oriented teachers are more concerned about "getting the material across" than they are about whether the resulting learning can be used by students in other courses or whether it is retained after examinations are over.

Loss in Integration. Traditional education produces unsatisfactory results with respect to transfer and retention because it presents a fractionated curriculum, a curriculum that consists of information and skills isolated from one another. The teacher can readily see a relationship between knowing the sequence of the presidents of the United States and an understanding of the facts of United States history. For him, the presidents' names and dates serve as a handy guide or timetable. The War of 1812 is related to the presidencies of Jefferson and Madison, the building of the Panama Canal to the term of Theodore Roosevelt, and so forth. But the student who is required to commit the names and dates of the presidents to memory does not perceive these relationships. As far as he is concerned, the assignment is a relatively meaningless task that must be performed to secure the approval, or to avoid the disapproval, of adults. With reference to the research on sense and nonsense syllables that we discussed in Chapter 8, we can predict that most students who learn the names of presidents out of any context of meaning will forget them. The validity of this prediction can be checked rather easily by asking adults who were required to learn this sequence as children whether they still remember the names. If they do happen to remember any presidents' names or dates, such a memory will be the result of later associations and experiences rather than of the earlier experience of having learned the whole sequence as a memory feat. The same principle applies to any kind of material that students are required to learn out of any real context of meaning: rules of grammar, capitals of states and foreign countries, Revolutionary War

generals, and so forth. Material that is learned out of any context of meaning is in effect nonsense, and the principles that apply to the learning of nonsense are applicable.

Some teachers object to learner-centered or group-centered methods of instruction because, as they point out, such classroom learning experiences may lack the organization and integration provided by the teacher in more traditional classrooms. This criticism may have some validity. It may be that in developing and experimenting with learner-centered approaches to education, teachers have been more concerned about giving students the freedom to think for themselves than they have been in organizing and integrating the experiences of the classroom. However, in spite of these presumed shortcomings, the available research indicates that the educational results produced by newer methods are in all respects either equal to or better than the results of traditional methods. Just to cite one of the many studies contrasting newer with more traditional methods, Donald R. Green (1954) compared scores made on a cancer-knowledge test by students in twenty-eight schools of medicine. He classified the students with respect to the number of hours they spent on the following: (1) listening to instructors talk about cancer (lecture); (2) talking with others about cancer (discussion); (3) working with tumors in laboratories; (4) watching others work with patients (observation); and (5) actually working with patients. Green found that the second method (discussion) was most frequently utilized by the schools whose students had the best scores; in fact, this method accounted for the major portion of the differences found. Actual practice with patients was also a valuable method, but it was not as helpful as discussion, as far as the results of the test were concerned. The schools making the poorest showing tended to use observation without discussion and actual practice, but observation combined with discussion and actual practice was used by the best schools. Green points out that the superiority of schools using discussion plus actual practice and the inferiority of schools relying largely on lecture were not due to the superiority or inferiority of methods alone. "Instead, the fact that a school used these methods extensively was an indication that the faculty was sufficiently interested in teaching and in their students to put in the time and effort necessary to work closely with students individually and in small groups. Such an attitude should result in superior performances."

It may be that when teachers object to lack of integration in the newer methods, they are referring to integration from the standpoint of the teacher, overlooking the fact that, in the final analysis, integration must be supplied by the student. It is the *student's* frame of reference that really counts in learning, not the teacher's. It is quite possible that the discussions of cancer

in the study cited above would seem poorly integrated from the standpoint of a lecturer, yet they proved to be a better approach to medical education than the better-organized lectures.

Perceptual Rigidity. Another result of teacher-oriented and teacher-dominated methodology is the learning of rigid, stereotyped patterns of behavior, instead of flexible patterns that can be applied to a variety of life situations. A. S. Luchins (1942) presented students with a series of problems in arithmetic involving the manipulation of jars of water. Students were shown a method that was helpful in solving the first problems in the series. Then they came upon a problem that was quite simple, but which could not be solved by the first method. A great many students were unable to recognize that the first method did not apply. College students did no better than younger students. When searching into the causes for this inability to solve simple problems, Luchins found that students had in many cases been taught *not* to think when faced by a problem in arithmetic. They had been taught, instead, to apply certain arithmetical procedures to a set of problems, an assignment that required them merely to imitate a specified kind of solution, rather than to analyze situations to see which method applied.

An instructor in college freshman chemistry noticed that one of his students was failing rather badly, so he called her into his office for a talk. In the course of the conversation it developed that the girl had been an honor student in high school and had received top grades in mathematics. The instructor was mystified.

"What I can't understand," he said, "in the light of your superior knowledge of mathematics, is why you are having difficulty with equations in this class."

To which the girl replied:

"I think you'll find that I can solve just about any equation you give me—provided you set it up first."

Again the problem here is of learning skills in isolation, devoid of any context of meaning. The student complies with the teacher's directions and commits the assigned work to memory, but no real learning of any practical value has occurred.

Problems in Communication. Alice V. Keliher (1936) once made the following comment on a finding that a three-year-old child used more than 11,000 running words per day and a four-year-old used 15,000:

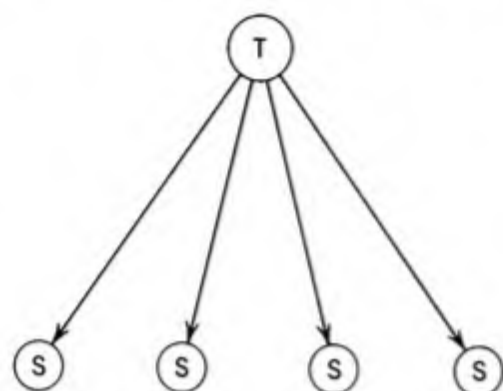
Think how the formal teacher of five- and six-year-old children stems this flood by raising her hand against speech! I marvel that young children are actually able to inhibit speech as they do for four or five hours a day; but I marvel more at the continuing stupidity of schools which thus cut off the very life-blood of the intellectual development of children.

Keliher was referring to the fact that speech—oral communication—is a tool for learning. Students who cannot communicate cannot learn. And one of the chief difficulties with teacher-oriented methods is that they block and interfere with communication. Education, as any other social process, depends on communication for its effectiveness. Unless members of a group can communicate with their leader and he with them, attempts at collaboration will lack effectiveness.

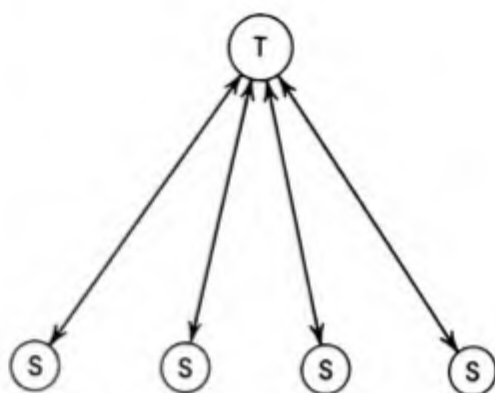
The problem is not that the teacher does not recognize the value and importance of communication. Even the most autocratic teachers are concerned about getting students to understand them. The difficulty lies in the fact that teachers are inclined to think of communication primarily as a process whereby they transmit information to students. The need for students to communicate with teachers and with one another tends to be subordinated, overlooked, or dismissed as unimportant. Teachers forget that communication, if it is to be effective, should be a two-way or at best a three-way process. The importance of communication among students is apparent when we consider the complex nature of the information, skills, concepts, and attitudes that we expect them to acquire as a result of their educational experiences. The educational process can be viewed as a vast and complex sequence of problem-solving experiences. In such problem solving, more communication is to be desired, not less. Experiments conducted by George A. Heise and George A. Miller (1951) with various combinations and conditions in small groups indicate that the more accessible group members were to communication, the more effective groups were in solving the problems that had been assigned to them. John T. Blue, Jr. (1958), compared the achievement of students studying in groups with that of students studying alone and found group study to be more effective. The relative effectiveness of various arrangements of communication channels, or communication "nets," as psychologists term them, is illustrated diagrammatically in Figure 10-1.

One of the reasons why teachers are reluctant to increase the number of communication channels in their classrooms is the common conviction that what adults have to say is more important than what children or adolescents have to say. This attitude is embodied in the traditional maxim: "Children should be seen and not heard."

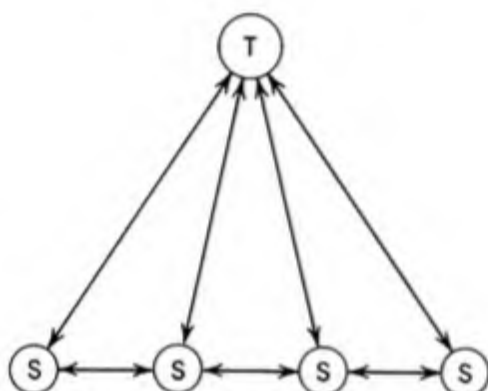
Even if we support this definition of what the desirable relationship between teacher and student should be, we must admit the need for some kind of two-way communication. If communication is limited to one-way transactions, how can teachers find out what students do not understand? How can students ask for clarification and further explanation? In the most traditional learning situations, particularly as characterized by European second-



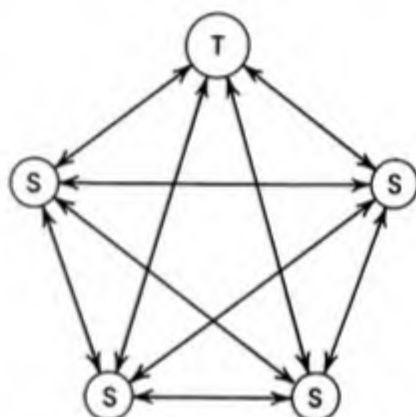
1. *Least Effective.* The teacher attempts to maintain one-way communication with students in the class.



2. *More Effective.* The teacher tries to develop two-way communication with students in the class.



3. *Even More Effective.* The teacher maintains two-way communication with students and also permits some communication among students on a rather formal basis.



4. *Most Effective.* The teacher becomes a co-participant in the group and encourages two-way communication among all members of the group, including himself.

FIGURE 10-1. Various types of communicative relationships between teachers and students, in order of their effectiveness.

ary schools, the teacher often erects an almost impenetrable barrier between him and the class, and students are discouraged from asking questions. The student finds out whether he has understood the teacher when he receives the marks on his examinations. Inasmuch as this approach makes learning unnecessarily difficult, the failure rate is quite high. Although this rather grim procedure has what some teachers consider to be a desirable feature—that of “weeding out the unfit”—it is also a method that is very wasteful of talent and energy. This approach is yielding to more effective methods in European schools, as well as in the United States and Canada, but it still persists in universities and colleges throughout the world.

The teacher who is more interested in the success of his own communication rather than that of students ought to be concerned about two-way

communication for an additional reason. In effect, he cannot tell how successful his attempts at communication have been until students have communicated something back to him. Without such "feedback," as psychologists term it, he is like a rifleman blazing away at a concealed and moving target, without any knowledge of whether he has missed or how far wide of the mark he is shooting. Even in the most autocratic and traditional classes there are channels whereby students can communicate with teachers, if teachers permit them to be used. Although there may be no opportunities for students to ask questions, discuss, or comment, there are quizzes, examinations, and assigned papers. All too often, however, teachers are unaware of the ways in which these channels may be used for effective communication or how they may be used to evaluate the effectiveness of teaching.

Arthur W. Combs (1965) has this significant point to make about communication between teacher and students:

I have often observed in my classes that communication between me and my students increases in direct proportion to the degree of "earned" authority I hold in their eyes. By "earned" authority, I do not mean my titles and the books I have written. I earned these, to be sure, but not with my students. By "earned" authority, I mean the authority my students invest in me as a consequence of their personal discovery of who I am, what I believe, and whether what I have to say is important. I do not have this earned authority when I meet these students for the first time. All I have is my "unearned" authority: my degrees, my reputation, and the catalog designation that I am the boss of this course. So long as these unearned authorities are in ascendance in our relationship, students hardly hear what I say. Accordingly they dutifully write things down because if they did not, they would forget them. Later, when they know me better, and if I have earned my place as teacher in their eyes, they do not bother to write much down. We do not forget what *important* people have to say to us.

The Improvement of Communication: A Function of Education. In one sense, the basic purpose of education is the improvement of communication. The illiterate is, in effect, one who is unable to communicate adequately with his fellow men. He cannot read; hence he cannot communicate with the past through books. Because he cannot cipher, he cannot communicate with others through arithmetical concepts. He has difficulty in discussing the affairs of the world and community because he has not developed a background against which to carry on such discussions. He is inclined to break laws because he is unable to understand them or, more likely, because he cannot express himself in socially acceptable ways and therefore must fall back on asocial or antisocial means. He is unable to comprehend the broad and pervasive relationships that unite him with other people; therefore he

may act in ways that are self-centered and uncooperative, or in other ways contrary to the welfare of others. Because he does not understand the complexities of civilized society, he very often cannot take steps to act in his own behalf. He does not vote because he fails to see the importance of this communicative act.

Therefore, one of the most essential tasks of the school is to help future citizens to learn how to communicate. Communication includes not only the specific techniques commonly identified with communication—reading, writing, and speaking—but also learning things that are worth communicating, learning to recognize the desirability of effective communication, and learning that better communication is something worth working for. Good communication is not just a matter of learning techniques or opening up channels; it also involves the development of a generalized attitude of acceptance toward others. In a situation where good communication exists, individuals are not only concerned with finding more adequate ways in which to express themselves, but they are also willing to listen to others with sympathetic interest and attention. They recognize that communication is really a difficult task, a task that demands much, a task that must be worked at continually if better understanding is to take place. Many of the ills of the world are the result of inadequate understanding, which in turn results from poor communication, and the failure of many teachers to help students learn is the result of students' not understanding teachers and teachers' not understanding students.

The task of improving communication in the classroom is to a much greater extent the responsibility of the teacher than of the student. In the first place, the teacher as an educated and mature person has the greater communicative skill; in the second place, his position as the person in charge enables him to create the kind of emotional climate that will facilitate or frustrate communication. Traditional methods of education reverse the relationship to some degree, making it the responsibility of the student to understand the teacher, rather than the other way around. The teacher tells the students what is what, and it is up to them to figure out what the teacher is trying to communicate. This attitude not only leads to oversimplified ideas about the communicative process, but also leads teachers to absolve themselves of any responsibility for improving their ability to communicate.

Within the last generation or so, a number of reforms have been instituted to improve classroom communication and thus make education more effective. The vocabularies of spelling lists and readers have been rigorously revised to adapt their scope and content to the words actually used by children. There

Problems of Management in Classroom Learning

are some who feel that we have gone too far in such revision, pointing out that if we limit ourselves to teaching children what they already know, how will we be able to extend their experiences? The problem posed here is a neat one: how to keep the vocabulary of the classroom within the limits of children's understanding and comprehension and still make learning an expanding, stimulating experience. In other words, how can we keep it simple enough to produce maximum understanding and complex enough to promote maximum learning? Another criticism is that the vocabulary appropriate for the "average" child is too difficult for the retarded child and too simple for the gifted. We are therefore in a position of simultaneously frustrating the mentally retarded and encouraging mediocrity in the gifted.



Audio-Visual Services, Alameda County Schools

Although students who have asked for help with a problem will listen with close attention to the teacher's explanations, this does not mean that the role of the learner should always be that of the listener.

The Increasing Complexity of Educational Problems. One of the lessons demonstrated here is that when we undertake the twin tasks of understanding students better and redesigning educational experiences accordingly, we find that problems are not simplified but are made more complex. Hence many teachers become discouraged. Understanding students does not solve any problems, they say; it just creates new ones. Teaching is a job that is hard enough, they say, without trying to make it any harder. Therefore we should perhaps not be too critical if teachers elect to adhere to a teacher-centered, teacher-dominated approach to learning. If they do, they will have the support of most of the citizens in the community, who find it easier to understand schools that are adult-centered rather than child-centered. A number of schools, such as the Boston Latin Grammar School and some other outstanding preparatory schools, have had apparent success with teacher-centered curricula and methodology. What is usually overlooked is that such schools cater to a select minority of the population. Furthermore, it would be difficult to determine the extent to which the superior educational attainment of their graduates is due to the kind of formal education they received in school or to the informal education they received outside the classroom.

In some respects, education is where the natural sciences were a hundred years or so ago. Scientific knowledge was much simpler then, and people could, because of their ignorance, be more positive about things than we can be now. The more we learn about the world and the people who live in it, the more our certainties and easy generalizations are undermined. It is understandable how both educator and layman may often long for former days when problems were simpler and remedies more direct and drastic, but the increasing scope of our knowledge forces us to recognize that what seem to be simple problems are only the surface manifestations of complex conditions, and that direct and drastic remedies are often both inappropriate and dangerous.

Because the behavioral sciences, including psychology, deal with organisms whose behavior is infinitely more complex than the subject matter of the natural sciences, they must progress more slowly and tentatively. Nevertheless, the need for improved methods in education and other fields of applied science is so great that we cannot wait for final results, any more than physicians can afford to wait until we know all there is to know about psychological processes and virus infections. Physicians, educators, and other applied scientists need to apply the knowledge we have in order to press on to better understanding and better solutions of the problems that face us.

We as educators cannot make this kind of progress if we insist that it is neither necessary nor important to understand the children and adolescents

we teach, their motivation, and the functioning of the learning processes. Nor can we make progress if we choose to ignore the fact that the attitudes and feelings of the teacher, as well as the relationship that develops between teacher and class, have an important effect on the success or failure of the educational program. And as long as we continue to make the teacher the central and dominant figure in the learning situation, we will be acting as though the understanding of the learner and his needs is unimportant, or, at best, distinctly secondary to the needs of the teacher to communicate information.

SUMMARY

A preoccupation with the management, direction, and control of students tends to lead to a teacher-centered type of classroom. Evidence shows that teachers do have positive effects on students, but they may have negative ones as well. Although there are some cogent arguments that favor teacher-centered classrooms, the counterarguments have the psychological advantage. For one thing, teacher-centeredness tends to create a "closed" educational situation that allows little opportunity for experimentation and change. The problem is not that of replacing the teacher, but rather making him more effective.

In our adult-centered culture we are inclined to think of children's behavior as something that should be brought into line with adult standards as soon as possible. Even though this attitude runs the risk of creating resistances to learning, it leads us to insist on the teacher domination of the learning situation. We tend to maintain this attitude in spite of research that shows that learning proceeds more effectively if learners are subject to less guidance and manipulation than we ordinarily prefer to give.

In teacher-dominated classrooms, the wishes, needs, and feelings of the teacher come first. He will do most of the talking and will favor methods of lecture, drill, and recitation. Such behavior is to a large extent fostered by conditions of mass education that require teachers to take up much class time with the details of classroom management. The research on assigned homework raises questions as to its value as an aid to the learner, but teachers and parents nevertheless find it attractive because it enables them to maintain control over the behavior of children during the out-of-school hours. Although examinations have considerable value as aids to learning, they can also be used as devices to enforce and maintain teacher domination of the classroom. Whenever this occurs, students come to regard tests not as learning aids, but as sources of potential failure, and teachers regard them as devices for ranking

students and making decisions about them, rather than as means for promoting learning and evaluating the effectiveness of their teaching.

Research comparing teacher-centered with learner-centered methods indicates that the latter are more effective, particularly with respect to bringing about desired changes in behavior. Discussion methods, for example, appear to promote more effective integration of subject matter than do lecture and recitation. Some of the difficulties in learning in teacher-centered classrooms may be traced to the fact that communication among students and between students and teacher is impeded.

Teacher-centered schools discourage attempts to develop better understanding of students and of learning processes, partly because such understanding makes the job of the teacher appear more complex, hence more difficult. As the progress of science has shown, however, the older and simpler solutions to problems are not always the best. Sometimes they are even dangerous. Because the need for improved methods in education is great, we should develop a better understanding of the complexities of learning and classroom behavior, but such understanding cannot make headway as long as classrooms are teacher-centered, and as long as we feel that the understanding of learners is not as important as the understanding of subject matter.

SUGGESTED PROBLEMS

1. Think back over your own experiences in schools. Describe the classroom behavior of the teacher who you think was the most teacher-centered (or subject-matter centered) and the one who was the most student-centered.
2. What are some of the ways in which teachers can make examinations less anxiety-provoking and more helpful as learning devices?
3. Art educators have observed that children in kindergarten and primary grades are "natural artists," but that they tend to lose spontaneity and originality by the time they get to junior high. What are some of the forces and factors that very likely contribute to this change?
4. Let us say that you are about to take over a Scout troop. What are some of the things you can do to develop good communicative relationships among the members of the troop and between you and the troop?
5. Arthur W. Combs has been cited in this chapter as saying that good and poor teachers both know what the characteristics of a "helping relationship" are, but good teachers are able to be genuinely helpful, whereas poor teachers are not. He also says that the differences between these teachers lie in their feelings and attitudes toward themselves and others. How do you think these feelings and attitudes might differ?

6. Combs also described how communication in his classes improves when students perceive him as having "earned" his authority. What are some of the things you might do to "earn" your authority with students in your classes?

SUGGESTED READINGS

- Bass, B. M., *Leadership, psychology, and organizational behavior*. New York: Harper, 1960. Part V, "Coercive and permissive leadership," contains some material that is appropriate to the role of the teacher as an authority figure.
- Cantor, N., *The teaching-learning process*. New York: Dryden, 1953. See particularly Sections 2 and 3.
- Dinkmeyer, D., and Dreikurs, R., *Encouraging children to learn: the encouragement process*. Englewood Cliffs, N.J.: Prentice-Hall, 1963. Suggests an approach whereby teachers can develop helping relationships with students.
- Gouldner, A. W., ed., *Studies in leadership*. New York: Harper, 1950. Part 3 deals with authoritarian and democratic leaders.
- Henry, N. B., ed., *Social forces influencing American education*, 60th Yearbook, Part II, National Society for the Study of Education. Chicago: University of Chicago Press, 1961. See particularly the chapter by Merle L. Borrowman, "Traditional values and the shaping of American education."
- Mouly, G. J., *Psychology for effective teaching*. New York: Holt, Rinehart, and Winston, 1960. The last chapter in the book deals with some of the issues raised by comparisons of traditional and modern viewpoints on education.
- Steeves, F. L., ed., *Readings in the methods of education*. New York: Odyssey, 1964. Part I provides a variety of viewpoints on the amount and kind of direction and control teachers should exercise.

11 Discipline and the Learning Situation



C. Hays from Monkmeier

The Meaning of Discipline. There are three meanings that are commonly ascribed to "discipline"; hence it is not always clear what we mean when we use the word. For example, what does a teacher mean when he says: "What that boy needs is discipline"?

One common meaning is that of "punishment." In the sentence cited above, the teacher may be saying that he thinks the boy ought to be punished.

A second common meaning is that of "control by enforcing obedience or orderly conduct." If the teacher is thinking of the word in this way, he is saying that the boy should have someone direct, control, and limit his behavior, the implication being that the boy is unable or unwilling to direct, control, or limit his own behavior.

A third common meaning is that of "training that corrects and strengthens." The implication here is that the objective is *self-discipline*, that the purpose of the training is to enable the individual to do his own directing and controlling. Hence the teacher means, if he is using the word in this sense, that the boy should have experiences that will improve his self-control and make him a more self-directing individual.

The chances are, however, that the teacher does not sharply differentiate among the several meanings of the word and has all three meanings in mind. Very likely, he is thinking that if the boy is punished, and if he gets a great deal of direction and control, he will develop self-discipline. The teacher may very probably think in these terms because these are the kinds of ideas that people commonly have about discipline and its merits. However, like so many popular ideas about human behavior, the everyday concepts of discipline are based partly on sound principles and partly on wishful thinking. For example, it is true that children need control and direction, but it is improbable that they can learn self-control and self-direction if they are controlled and directed all the time and at every turn. The difficulty is that it seems to be easier for

us to *enforce* controls than to help children do their *own* controlling. Because enforcing controls is easier, we also find it easy to conclude that children can learn to control themselves through a regimen of enforced control.

Although teachers may disagree on the question of how much control and direction children should have, they are generally agreed that children should learn how to discipline themselves and thus grow up to become adults who are responsible, law-abiding, considerate of the welfare of others, and able to carry on the important responsibilities of life in the face of frustration, tempting distractions, and other difficulties. The question is: how can we help children develop these qualities?

One answer is that schools should help children develop self-discipline by teaching them such values and traditions as fair play, respect for the opinions of others, freedom to search for truth, and the right of weaker and subordinate individuals to be heard. Clarence W. Hunnicutt (1949) had reference to the



San Francisco State College—Joseph Diaz

Students can learn valuable lessons in self-discipline by working together on assignments that are interesting and that have possibilities of adventure—such as planning a trip.

teaching of such values when he made the following statement in delivering the J. Richard Street Lecture at Syracuse University a number of years ago:

Not all our teachers have had this vision. There have been those who insist on dogmatic learning. They feel they should know all the answers and are afraid to let children explore into areas where the teacher cannot feel secure. These are likely to be the teachers who have not clearly differentiated between obedience and responsibility. They realize that their pupils are not accepting enough personal responsibility for their actions, yet at the same time they are preventing them from doing so by insisting on too strict obedience.

Obedience and responsibility are contradictory. A child kept in a state of obedience to authority where he must accept the dictates of others without opportunity to test out his own ideas cannot become responsible. Only as he has liberty to make plans, to carry them out semi-independently and to see their results can he become a responsible citizen. The period from the kindergarten on through the secondary school should be a steady movement along the scale away from immature dependence upon external control toward mature dependence upon individual responsibility. Teacher discipline gradually becomes self-discipline essential to a free democracy.

Self-discipline cannot thrive in an atmosphere of fear and rigid control. Where motivation for correct behavior is the effort to avoid displeasing some authority, children remain dependent personalities. When children have an opportunity to plan their own activities, when they help make their own decisions about the way in which they spend their time, when they learn voluntarily to subordinate some of their special self-interests to the total welfare of the group, then they are able to assume their rightful place in our culture. As a minor symptom of this growing maturity, the teacher can leave the room without the chalk beginning to fly. It is ironical that in many school systems the obvious chronology of development is reversed. Children in the kindergarten, who have little maturity, characteristically have much freedom to choose their moment-to-moment activities. Yet high-school seniors with many added years of experience and presumed maturity are likely to have little voice in choosing what shall be done during a class period. They are given little chance to grow up educationally.

Teacher-Imposed Discipline. We have said that teacher-imposed control is necessary to some degree. It will certainly be needed more at some periods of life than at others. Preschool children playing together in a well-equipped and well-planned nursery school need very little discipline. There is little that they can destroy, and only the occasional child needs to be protected from his fellows. Elementary school children need much more control and direction, because they do not know how to work and play in large groups. They are incapable, without considerable help, of creating the kind of group structure that is necessary for organized activities. By working and playing in

what psychologists call a "structured situation," they learn some of the techniques and attitudes that are necessary to maintain "structure." They also learn to enjoy some of the security and stability that develops when the "structure" is largely created and maintained by the teacher. Gradually, as they learn to work and think as a group, to listen to each other and not to talk when others are speaking, and to assume some of the responsibilities of leadership, they become able to carry an increasing share of the direction and control and to create "structure" of their own.

As children become more mature, they not only develop the skills necessary for self-control and self-direction, but they also develop attitudes of preferring to work with self-disciplined groups and of wanting to develop standards of self-discipline of their own. However, even when children are ready to be largely self-directing, as they are during the adolescent stage of development, there is a need for an adult to be in the background, to be used for consultation or emotional support or to be available in case of an emergency. Furthermore, the development of self-discipline and stability is not a constant, gradual growth curve, nor do children always welcome the help of adults, even when they have a pressing need for it. During the preadolescent period, for example, children often go through a "negative," rebellious stage, when they seem to delight in frustrating and annoying the adults in charge. Very often such behavior is a kind of psychological smoke screen for feelings of helplessness and uncertainty—that is, by adopting an antagonistic attitude, preadolescents try to avoid admitting to themselves that they have any need for either the control or the approval of teachers and parents.

One of the perplexing characteristics of children, particularly during the preadolescent period, is their need, on the one hand, to have someone set limits for their behavior and, on the other, to test or challenge the very limits that have been set. We often find ourselves drawn into a kind of trap because of these ambiguous and often contradictory motives. Some adults, when confronted by complaints of children that limitations on their behavior are too severe, react by doing away with all or most limits. Thereupon they are appalled when children respond to this greater freedom by actually worsening their behavior and blaming the adult in charge for what has gone wrong. On the other hand, adults who attempt to deal with this ambiguous situation by being severe, restrictive, and punitive cannot understand why children are so apathetic and why the behavior of some children actually becomes worse.

Such experiences show that the behavior of children cannot be handled on an "all-or-none" basis. The effective teacher is one who can allow children freedom to develop naturally and spontaneously, but who can also set limits to their behavior at appropriate times. The better the morale of the group

and the better the learning situation, the less need there should be to invoke limits.

The problem of the teacher with respect to discipline may be seen in terms of a problem in leadership, to which some of the findings that psychologists have made in this field may be applied. One approach to the study of leadership identifies two dimensions: *initiation of structure* and *consideration*. Leadership activities concerned with the initiation of structure include direction, control, punishing, setting limits, rewarding, manipulating, organizing, scheduling, maintaining standards, and the like. Consideration includes such behavior as extending sympathy and understanding, compromising, helping, inviting and using suggestions of group members, and being supportive. Questionnaires measuring these two dimensions of leadership have been developed and used under the direction of the Personnel Research Board



R. Snyder from Monkmeier

Students learn to accept responsibility, direction, and the need for "structure," more readily when they have a chance to serve as members of the school traffic patrol.

of Ohio State University (Stogdill and Coons, 1957). Most leadership roles call for both structure initiation and consideration, and it is generally undesirable to stress one dimension to the exclusion of the other. The relative proportions of structure initiation and consideration that should be incorporated into a given teacher's behavior will be a function of the maturity of the class, the kinds of activity undertaken by the class, the psychological climate of the school, the expectations of both teacher and students, and the personality of the teacher. Although there is no hard-and-fast rule that can be used to determine the proper proportion of these two dimensions, it is safe to say that most teachers tend to err in the direction of providing more than enough structure initiation and not enough consideration. Few teachers err in the direction of providing too much consideration. Perhaps the worst learning situations result when teachers provide *neither* structure *nor* consideration.

One of the perplexing problems in determining whether to emphasize structure initiation or consideration occurs when teachers encounter a student whose problems seem different from others in the group. Perhaps the teacher has been firmly "laying down the law" about late assignments, whereupon some student shows up with a late assignment and what appears to be a valid excuse. Furthermore, the student is a sensitive child who "overreacts" to criticism. Should the teacher emphasize the structure initiation or the consideration aspects of his role as classroom leader? Introducing structure initiation might seem harsh, but an attitude of consideration might seem weak and soft. Furthermore, is it not "democratic" to treat all students alike? If we modify our treatment of students in accordance with their apparent motivation, their background, and the kind of problems they present, are we not "making exceptions"? Harold A. Delp (1949) points out that the fear of making exceptions is in effect a form of the punitive theory of discipline. The belief that it is "democratic" to treat all cases of, say, truancy or stealing alike very likely covers up some of our more psychologically obscure reasons for wanting to punish, reasons that we would like to overlook or ignore. The more mature way of handling the problem behavior of children is to base treatment on an understanding of their problems and psychological needs and not according to some rigid, formulistic pattern. Delp continues as follows:

A child is an individual. As such, he should be treated like an individual. Regardless of his age, each child has certain attitudes of how he thinks life should go. A great absurdity in our culture is the common parental belief that when a mother calls a youngster to do some household task the youngster should immediately stop whatever activity he is doing and respond to the parent's wishes. There is no consideration of the child's own feelings, or even of his belief that *his* activity is much more important than that which his parent desired accomplished. Among

adults it is accepted that when a request is made it be weighed in terms of the present situation and that this request be satisfied in a reasonable manner and span of time. For the child most adults deny him the privilege of this same consideration. When parents and teachers expect action it should be on a reasonable basis considering the child's point of view as well as the adult point of view. Included in any consideration of independence for both the home and school is the wise use of group pressure and group ideals. These factors can be indirectly modified and controlled in many ways to produce a healthier attitude toward independence on the part of the child.

A further comment on the controlling behavior of teachers is in order. Most teachers find it necessary to exercise controlling functions at some time or other. How much control and at what point it should be administered are questions that each teacher must answer for himself. The answers depend partly on the emotional climate prevailing in the school, the degree of respect that the teacher has for students and that they in turn have for him, and the amount of disorder the teacher and class can tolerate and still make progress in the tasks of teaching and learning. Not all these variables can necessarily be influenced by the teacher. In some schools, for example, the level of hostility and disrespect for authority runs so high that more than half the teacher's time is spent in maintaining order. This is not, however, the usual situation. But there are many teachers who are unnecessarily preoccupied with control—that is, they err in the direction of providing more control than students need in order to function as effective learners.

Some research conducted with elementary teachers in Salt Lake City and suburban schools showed that teachers' insistence on control and order in their classes occurred at the sacrifice of qualities of personal warmth. Observers sat in on the classes of 118 teachers and wrote down the first utterance teachers made at the start of each minute of a twenty-five-minute period. There were four observation periods, and a total of one hundred statements was collected for each teacher. These statements were then rated by other researchers in terms of whether they indicated a concern with achievement, affiliation, control, or management. The ratings were in turn correlated with other measures of teacher behavior, including the general impression teachers made on observers. The results, some of which are shown in Table 11-1, show that teachers who were perceived as cold and controlling, tended to behave toward students in ways that were perceived as punitive and rigid. Their classes were monotonous, and there appeared to be little concern with the students' academic achievement. This does not mean that a concern with control is necessarily a negative factor: note that teachers who involve their students in much academic activity also exercise control and are systematic.

TABLE 11-1. Varieties of Teacher Behavior Tending to Occur Together or to Be Interrelated, Classified According to Teacher Types, as Determined by Objective Observers (after Wallen, Travers, Reid, and Wodtke, 1963)

Type of Teacher			
Cold and Controlling (as Contrasted with Warm and Permissive)	Vigorous and Dynamic (as Contrasted with Dull and Quiet)	Insecure and Anxious (as Contrasted with Confident)	Much Academic Activ- ity (as Contrasted with Little Academic Emphasis)
Type of Classroom Behavior			
Activities very orderly	Stimulating	Uncertain	Systematic
Much direct control	Excitable	Disorganized	Much direct control
Delegates little author- ity to students	Gives support	Much evidence of	Emphasized learning
Low affiliation motiva- tion	Vigorous	emotional frustra- tion	Functions often as a source of knowl- edge
Frequently punishes	Functions often as a source of knowl- edge	Dull	High achievement motivation
Aloof	Very verbal	Excitable	
Harsh		Frequently punishes	
Inflexible		Negativistic	
Hostile			
Dull			
Much evidence of emo- tional frustration			
Negativistic			
Neuroticism			

The question appears to be: control for what? The first type of teacher maintains order for its own sake, or because he finds disorder highly upsetting, whereas the second type uses control in support of a systematic program of classroom learning. Note that the insecure and anxious teacher exercises little direct control, punishes often, and is disorganized, whereas the vigorous and dynamic teacher needs to have relatively little concern with problems of control and discipline.

Punishment. Many teachers think of discipline in terms of punishment, not necessarily *physical* punishment, as was the mode a generation or so ago, but rather social or psychological punishment: detention (keeping students after school or keeping them in the classroom during play periods), extra assignments, isolation (sending students out of the room or to the principal's office), humiliation (sarcasm, scolding in public), suspension from school, academic failure, or giving students a "talking to" in private.

In spite of the prevalence of psychological and social forms of punishment,

most teachers seem to favor the judicious use of corporal punishment, at least in the elementary schools. A survey by Carol J. Henning (1949) of Midwestern secondary school principals a number of years ago also showed that about half were using physical punishment, although they said they used it infrequently. Psychological and social methods of the type described above were preferred. However, only two principals out of the 225 surveyed indicated that student misbehavior called for anything other than punishment. One of these said that the school should try to find out what was troubling the offending student and give him something to do that he was interested in and could excel in, and the other said that his school made an attempt to understand the offending student's background and the basis for his behavior, following it up with conferences with the student and his parents, if necessary.

As contrasted with high school principals, elementary teachers seem to be less inclined to take punitive action. Frank Slobetz (1950) asked 290 teachers how they would handle such problems as the following: "Mary whispered at every opportunity"; "four boys were playing marbles for keeps"; "Eddie was careless and untidy in his work"; "Howard and Sam had a fight on the playground"; "Betty took a nickel that didn't belong to her." A minority of the teachers gave responses that indicated some sort of punitive action. Of the group, 10 per cent said they would use censure or criticism; 10 per cent said they would use some sort of deprivation; 4 per cent said they would require overtime or extra school work; 2 per cent said they would require children to make amends; and the following responses each received the approval of 1 per cent of the teachers—physical punishment, send or refer to the principal, and infliction of penalties. On the other hand, 26 per cent said they would try to find reasons why the behavior occurred. It is of course impossible to tell what the same teachers would actually have done in the situations that Slobetz presented to them, but it is encouraging that they at least were inclined to endorse nonpunitive methods.

A few years ago David P. Ausubel (1961), who has the unique distinction of being both a psychiatrist and a professor of educational psychology, surveyed the trends of classroom discipline in American schools and noted that there was a tendency during the years 1935 to 1955 for teachers to move in a less-punitive, more-permissive direction. Since 1955, however, this trend has been reversed, in his opinion. He felt that permissiveness had perhaps been overdone and that the growing firmness in the attitude of teachers had been a desirable change. He rejected the idea that children could be taught that dishonesty and rudeness are undesirable traits merely by rewarding honesty and good manners. He also maintained that the belief that "it is repressive

and authoritarian to request pupils to apologize for discourteous behavior and offensive language" is a distortion of democratic discipline, because such behavior on the part of students implies a disrespect for teachers, who are just as entitled to respect as students are. "There is good reason to believe," he wrote, "that acknowledgement of wrong-doing and acceptance of punishment are part and parcel of learning moral accountability and developing sound conscience. Few if any children are quite so fragile that they cannot take deserved reproof and punishment in stride."

Ausubel felt that there was little danger of the climate in American classrooms becoming as authoritarian and punitive as that of British schools. A teacher in such schools, he said, often begins the new term by showing his class a cane and announcing that he plans to use it on the first one who steps out of line. American teachers, on the other hand, treat discipline in an incidental way, expecting that it will be a natural by-product of interesting class sessions and wholesome teacher-pupil relations, and that the vast majority of students will respond positively if they receive fair and kindly treatment. The American teacher expects that he will be respected for his expertness, superior knowledge, and his position and is not inclined to depend on such props to his status as being called "Sir" or "Ma'am" or the fear of the strap. Thus he treats adolescents as maturing young adults, rather than as unruly children, expecting them to respond in kind—which they usually do.

In a discussion of some of the theoretical aspects of the learning process, John P. Seward (1954) came to conclusions that are to some degree consistent with those of Ausubel in that he agreed that punishment cannot be completely eliminated from the learning situation. He felt, however, that its indiscriminate use was fraught with certain dangers. If punishment is introduced too early, it may prevent the learner from "identifying" with the teacher—that is, it may interfere with the learner's using the teacher as a model for his behavior. Seward also pointed out that if punishment is too severe, it may also fix what is learned in too rigid a mold. And, finally, if punishment is "relied on too exclusively it may give a child a lot of specific inhibitions with no integrating values to bridge the gaps between." In other words, education that emphasizes punishment may cause a child to learn only what he should *not* do, without helping him learn what he *should* do.

Jacob S. Kounin and Paul V. Gump (1961) asked the principals and assistant principals of elementary schools to indicate the first-grade teachers whom they believed to be the most punitive and least punitive in their schools. Punitive teachers were more likely to be characterized by their principals along these lines: threatens children with consequences that really hurt; makes threats that imply sharp dislike, real willingness to harm child, and

ever-readiness to punish. Nonpunitive teachers were more likely to be described as "does not punish" and "does not threaten." Kounin and Gump then interviewed children from the classrooms of more punitive and less punitive teachers by asking the children to say what they thought was the "worst thing to do in school" and to indicate why they thought it was so bad. Judging from the replies, it appeared that the children from the more punitive classrooms showed a great deal more hostility and aggressiveness, were unsettled and confused about behavior standards, and were less concerned with learning and other positive types of school activities. Kounin and Gump concluded that children with punitive teachers are more likely to mistrust the school than are children with nonpunitive teachers. Children whose teachers are nonpunitive are thus better able to identify themselves with the school, to accept its values, and to adopt them as their own.

Gump and Kounin (1957) also studied the reactions of kindergarten children who were looking on when teachers corrected other children for misbehavior. The behavior of the teacher was classified in one of three categories: *clarity* (the use of such statements as "Don't hit others," "We don't do that in kindergarten," and "Fold your hands and look at me"); *firmness* (actions indicating "I mean it," such as approaching, touching, or guiding the child, or being emphatic in speech or gesture); or *roughness* (angry words or looks, overfirm handling of child). The observers noticed that teachers' behavior characterized by *clarity* helped to reduce misbehavior on the part of onlooking children, but that *firmness* was less helpful. When correction was characterized by *roughness*, however, it tended to encourage *an increase in misbehavior* on the part of the observing children. This research is particularly significant because the results run counter to what would be ordinarily expected—that is, most teachers would expect that the more severe the reprimand, the greater the impression on the onlooking children. It is quite possible that roughness on the part of teachers had a disturbing effect on children and upset them to the point at which they were unable to exercise ordinary controls over their behavior, or perhaps children tended to identify with the offending child. Thus the study also provides a strong argument for the administration of reprimands in private.

Still another caution to be observed with regard to punishment was uttered by Percival M. Symonds (1956) in a review of psychological research and theory relating to the use of punishment in education. Symonds warned against using punishment with children who have already been damaged, psychologically speaking, by too much punishment on the part of teachers and other adults. Damaged children, he pointed out, are likely to evoke

impatience, exasperation, and hostility on the part of teachers. The first reaction of the teacher, when challenged by such a child, is to want to punish the child further, thus adding to the damage. Damaged children, he maintained, need more than the average amount of forbearance, patience, and attention.

Rudolf Dreikurs (1951) gives an example of how a child can be damaged by teachers' preoccupations with punitive methods:

John was nine years old and in the third grade when he came to the attention of the psychiatric service. His teacher was complaining about the fact that he did not do his written assignments and usually drew pictures on work that was to be turned in. However, his work at the blackboard indicated that he had an adequate understanding of the material that was being covered by the class.

An investigation of John's background showed that he was the first-born son and the first grandson on both sides of the family, and as a consequence was the focus of a great deal of adult attention. His brother was born when John was four, and he naturally had to share some of the attention he had monopolized up to that point. John tried to regain some of the attention he had lost by making very slow progress and then only when his mother coaxed, reminded, and helped him. His experiences in the first grade were quite positive, for he learned to read and write, thanks to a sympathetic teacher who encouraged him and gave him help when he requested it. His second grade teacher, however, decided that he must be made to work and do things for himself. When this approach failed, she forced him to wear a sign on his chest: "I am dumb and slow." John reacted by becoming even more passive and refused to make any effort at all. In the third grade, the teacher maintained the kind of pressure that the second-grade teacher had applied, but without results.

When John went into psychological treatment, his mother was advised not to follow the teacher's recommendations of sitting down with John and helping him with his school assignments. Instead, she was told to buy some interesting and informative books written at John's level, leave them lying around the house, but decline to read them to him. John picked them up and began to read them, even though he had never previously read a book. He also started playing anagrams with his mother and got so he spelled very well. His academic work began to improve.

Unfortunately, this improvement did not appear until the end of the third grade. At this point, the teacher recommended that he be kept back another year saying that he was not ready to do fourth grade work. The school superintendent concurred. The psychiatrist tried to explain to them that there was nothing wrong with John's competence, since his blackboard work showed that he had learned the material, and that making him repeat the fourth grade would merely intensify the attitudes and behavior that had annoyed the teacher in the first place. However, the school was adamant, and John was kept back.

This anecdote illustrates a number of things about punishment. It shows how a child's negative reaction to criticism and humiliation is related to previous experiences. The second- and third-grade teachers' punitive treatment of John's learning problem merely engaged them in a power struggle with him, a struggle that they were bound to lose because he held the trump cards—his refusal to cooperate. Eventually, the school became more interested in punishing John than in teaching him. This is shown by the teacher's refusal to promote him to the fourth grade, preferring to keep him back in the third grade, where he could be subjected to another year of punishment and humiliation. The difficulty with using punishment in treating learning problems is that it becomes a function of the teacher's, rather than the learner's, psychological needs.

Group-Imposed Discipline. One of the problems faced by teachers is how to bring the forces generated by the classroom group to bear in helping students to control their behavior and develop ideals.

As a child gradually frees himself from the need to depend on adults for control and direction, he simultaneously begins to look to his age-mates and peers for cues as to how he should behave and what he should think and believe. Although the full force of group opinion and group pressure usually does not make itself felt until preadolescence, the first indications of the development of norms and standards appear rather early.

Dulcey, a second-grader, asked her father how to make a "b" in "real writing." The "b" she had been making looked more like a "g" than anything else, so he showed her what she was doing wrong and how *he* made a "b" in "real writing."

She objected: "Joanne says that *this* is how you make a 'b,'" indicating the "g"-like letter.

Her father's immediate reaction, which he did not voice, was: "If you were already satisfied with the 'b' that Joanne taught you to make, why did you ask *me* to show you how?"

Then he realized that Dulcey felt there *was* something wrong with Joanne's "b's," but when an adult criticized them, she felt called upon to stand up for her friend and to think, for the moment, that perhaps Joanne was right, after all.

So he said just that—"Perhaps Joanne is right"—and turned away.

A few minutes later he noticed that she was making her "b's" in the proper way.

The point is that even in the second grade the peer group is beginning to exercise a strong pull, and children are beginning to think: "Maybe I should do what other children do and not what adults want me to do."

Adults are inclined to take one of two courses—either to *ignore* the tendency of groups of children to develop their own standards of behavior and

enforce their own discipline, or to *prevent* the formation of groups, recognizing that children's groups often defy and resist adult authority and control. However, it would make much better sense, both theoretically and practically, if we recognized the group needs of children as normal and natural aspects of their development and instead included them in our educational program. Thus, instead of struggling against the course of these natural tendencies, we would be employing them to the advantage of all concerned.

Self-Imposed Discipline. The important thing to keep in mind is that the ultimate goal is *self-discipline*. When children have learned to respond to adult direction, they have successfully passed through one stage of social and emotional maturity; when they respond to the direction of their own groups, they are in a more advanced stage of development. However, if they are to grow to be responsible and thoughtful citizens, they must learn how to contribute to and develop group standards as well as respond to them. Sometimes the standards that groups set for their members are unwise. The individual



Audio-Visual Services, Alameda County Schools

Working in a woodshop requires a high degree of self-imposed discipline. Students must observe safety regulations, must meet exacting standards, and must respect the rights and feelings of others working in the shop.

who has not learned how to think through the meaning of his own behavior has no choice but to conform to the demands of the group, whereas the person who has been able to evaluate both his own standards as well as those of the group is in a position to contribute to the development of new and better group standards. The ability to contribute to the thinking of the group is a goal that ranks rather high on the scale of social maturity; it is one that many adults have not attained, yet it is one that the school must develop in students if it is to fulfill its obligation to future generations.

Task-Imposed Discipline. We have discussed three kinds of discipline: teacher-imposed, group-imposed, and self-imposed. There is another kind of discipline that plays an important part in the learning process. It is *task-imposed discipline*.

"Tommy," called Mrs. Bentley, "it's seven o'clock. If you want to see the Lone Ranger, you had better come."

"The Lone Ranger" was Tommy's favorite television program. He always dropped what he was doing and came running so as not to miss a second of the program, not even the commercial. But tonight there was no Tommy and no reply—at least not for a few seconds. Then came his answer: "I'll be along in a minute or two, soon's I get this stuff fixed."

This wasn't like Tommy. It was so unlike him that Mrs. Bentley walked down the hall to his room and peeked in. Tommy was seated at his work table, sorting stamps from a large pile into a score of smaller piles. He looked up as his mother entered the room.

"Hi, Mom," he said. "I was just getting these stamps ready for the gang. We all chipped in a quarter and I sent for them. I want to get them sorted out by countries before they come tomorrow morning."

"Don't you want to see the Lone Ranger?" Mrs. Bentley asked.

"Sure," answered Tommy. "But I want to get these stamps sorted out first. I'll be out in time for the real exciting part. You can tell me the part I miss."

And he turned back to his stamps.

We are all familiar with the task that grips and holds our attention, that demands more of our time than we expected to give. Once we have started, it is difficult for us to put it down, even for activities that are normally very attractive.

George is an eleven-year-old boy who is active and noisy. He likes to talk and show off. His parents think he is lazy because they can't get him out of bed before nine or ten o'clock on week ends, and he goes out of his way to avoid everyday chores like cleaning up his room or mowing the lawn.

But this is Saturday, and George has been up since 5:30 A.M. He packed a lunch for himself and even made his bed. He left the house at 6:15 to join a group of

Educational Psychology in the Classroom

Scouts who were going to hike through near-by hills to observe birds and animals in their natural surroundings. George was out on this hike all day. During this time he neither talked excessively nor showed off. He sat quietly without moving for what seemed hours while the group was observing various kinds of wildlife.

Going out with this group of Scouts was a special privilege for George. He was not a Scout as yet, but suddenly, this week, it seemed that becoming a Scout was the most important goal in life. So he had gone to Mr. Ricci, the vice principal, who was also a scoutmaster. Mr. Ricci had said that he wasn't sure whether George was ready for the Scouts. When George insisted that he was, Mr. Ricci decided to let him come on the Saturday hike as a kind of trial. But he would have to be on his best behavior, because the boys who were making the hike were two and three years older than George and they would not like to have their day spoiled by a boy who talked too much and who was overactive. George promised to behave. And when the excursion was all over, Mr. Ricci had to admit that George was far more mature than he had thought.

Each kind of task has a discipline of its own, whether it is sorting stamps, going on a nature hike, learning to do short division, working on a committee, or whatever. The greater the individual's maturity, the better he can discipline himself and the easier it is for him to conform to the demands of the task he has set for himself. Less mature individuals cannot accept the demands made on them by the task; hence they become frustrated and discouraged and give up easily. There are varying levels of maturity among the members of any classroom group; some students will be able to practice more self-discipline than others and will thus be more able to shape their behavior according to the demands of the tasks they wish to accomplish. In a well-organized, activity-oriented classroom, these more mature students often help to develop mature behavior in other students by acting as pacesetters and models for the whole group.

Task-imposed discipline is based on positive motivation. Individuals must somehow see the task as important to their self-concept—as a part of their perceived selves. For some students, it is enough that the teacher thinks it is important. But for most students, particularly during preadolescence and adolescence, the endorsement of the group is even more essential. Even though an adolescent might have a personal interest in a task, he feels the need for the support of the group and looks to it for approval first. Hence one of the main responsibilities of teachers of middle and upper grades and in secondary school is to be sure that the group is positively motivated toward the learning tasks at hand.

Class Management through "Stage Setting." Basically, there are three things that teachers can do to help classroom groups develop the motivation



Charles M. Schulz, United Feature Syndicate. (Reproduced by permission.)

Task-imposed discipline.

and the emotional maturity necessary for self-direction and self-discipline: "stage setting," reducing anxiety, and increasing anxiety.

Teachers can provide some of this help by "stage setting"—by arranging the learning situation so that certain difficulties are avoided and certain desirable results occur. One very common approach is that of developing a lesson plan beforehand. With the lesson plan in mind, the teacher knows what concepts or subjects the group should be helped to focus on, what materials to have on hand, and what can be said to the members of the group to prepare them for each new activity during the day. Because the teacher has thought through these matters, he knows what is coming up next and is prepared to deal with the kind of problems that might occur. This feeling of knowing what is likely to happen next is reassuring, it helps the teacher's morale and feeling of security. The class, in turn, is likely to take its cue from the self-confidence of the teacher, and a class that is self-confident, that feels secure and self-assured, is less likely to disintegrate or become chaotic.

Stage setting is a way of "initiating structure," or "structuring," a term used in recognition of the fact that any ongoing situation has a certain "structure"—certain characteristics and cues that people use as a basis for action. Panel discussions, spelling bees, the assignment of seat work, are all different ways of structuring learning situations. Each of these situations is characterized by certain roles that are played by students and the teacher. Some situations, such as quizzes and lectures, are more highly structured than others. A discussion in which class members are free to bring up any subject and to interact with one another is an example of a situation that is loosely structured. In determining the amount of structure, teachers should of course be guided by the needs and interests of the learners and the amount of direction and control that will produce the best results in terms of learning. Routines, for example, may be helpful in giving structure to regular classroom activity, particularly in the lower grades. When properly used, they can have a stabil-

izing effect and can focus attention on the learning problems at hand, but if overused they produce boredom and restlessness, the forerunners of more serious misbehavior.

The Teacher's Role as an Anxiety Reducer. One of the important functions of the teacher, or of any leader for that matter, is that of reducing anxiety. Some minimum of anxiety is essential for most learning, but too much anxiety has a disturbing effect on a group. It may arouse hostility and provoke aggressive behavior, or it may cause a class to draw into its collective shell and refuse to participate in *any* positive learning experience. Over-anxiety also has a distorting effect. It prevents individuals from seeing the facts as they really are and interferes with effective communication.

One of the outstanding characteristics of experienced, effective teachers is their ability to sense the "anxiety level" of the classroom group. They are aware that little learning will take place if the group is more concerned about its anxiety than it is about learning. As we have indicated previously, individuals who are very anxious are preoccupied with their anxiety. The thing that they want most is to do something about their anxiety, and they are relatively unconcerned about participating in the experiences their teacher may have prepared for them.

When Genevieve entered the second-grade classroom the first morning of the new school year, she got a pleasant surprise. Miss Peters, the first-grade teacher she loved so much, was to be her teacher in the second grade! After school, she ran all the way home because she couldn't wait to tell her mother the good news. She had been a little afraid of going into the second grade; some of the second-graders she knew last year had told her it was much harder than the first grade. But now that she had Miss Peters again, she felt confident and happy.

But her happiness was short-lived. On the morning of the third day of school, Mrs. O'Hara, the principal, came into the room with a sheet of paper in her hand. She read off the names of eight children and asked them to collect their things and come to her office. Genevieve was one of them. As she picked up her pencil and ruler and collected her lunch and coat, she had the feeling that something terrible was going to happen. It seemed as though a big lump was pressing down on her stomach.

When the children gathered in Mrs. O'Hara's office she told them that Miss Peters' class was so large that it had been necessary to transfer some of them to Miss Durand's class. Mrs. O'Hara also said that she understood how it might be difficult to move to a new class when you had just started making friends and had got to know the teacher, but that she knew they would find Miss Durand and her class very pleasant. Whereupon she walked down the hall with them to the new classroom and introduced them to Miss Durand.

Miss Durand smiled at them all and said how glad she was to have them in her class and, after the children had put their things away and had settled in their seats, she said:

"We have been talking about the pets we have at home and some of the things they do. I have a canary that sings all the time, unless you put a cover over his cage. Betty has a puppy that chews her father's slippers. David has two turtles that sun themselves on a rock."

And she pointed to the blackboard, where she had written what the pets did. She went on: "Does anyone else have a pet?"

One of the new children said: "In Miss Peters' class, Genevieve told us about her pet rabbit."

Miss Durand saw this as an opportunity to help the new children to become integrated into the class, so she asked, in her most pleasant manner: "Would you like to tell us about your rabbit, Genevieve?"

But Genevieve couldn't say a word. She could only look at Miss Durand and wish she were back in Miss Peters' class. She wanted to get up and run out of the room. But here she was in Miss Durand's class and she knew that she could never go back. She knew she ought to reply to Miss Durand's question, but the only thing she could do was to put her head down on her desk and sob as though her heart would break.

Genevieve's anxiety is so acute that she is unable to participate in the class routine. However, after she and Miss Durand have had a chance to talk by themselves a bit, she will feel less anxious. And because she is basically a happy child, she will find that she can enjoy Miss Durand's class as well as she did Miss Peters'.

Anxiety often starts with one individual and spreads through the class. When Genevieve broke down and cried, the anxiety level of the class was raised to the point where it was not possible, for a few minutes, to go on with the discussion of pets that Miss Durand had planned as part of the reading lesson. So instead of continuing, she sent Genevieve off to the washroom with another girl and helped the rest of the children talk about how it felt to come into a new class where you didn't know the teacher or any of the children. By the time Genevieve returned, the class was busily engaged in the "activity period."

When Celia Burns Stendler and Norman Young (1950) asked a group of mothers what problems their children had faced on entering the first grade, the mothers reported that the children looked forward to entering school and saw it as a very important step in the process of growing up. However, once the children were in the first grade, they found the aggressiveness of other children hard to take, particularly when it was directed against them-

selves. Furthermore, they found it hard to understand or accept the behavior of other children when it differed from their standards of goodness and badness. Either one of these conditions—realizing that one is the target for aggression or adjusting one's sense of values to the behavior of other children—would be by itself a prime source of anxiety. Fortunately, most first-grade teachers are alert and sensitive to the anxiety of their pupils and take steps to reduce it when it gets too high by such means as leading the classroom group into a new and interesting activity, permitting free expression through art media, allowing children to move and talk freely, and giving children a chance to "talk out" their problems and anxieties.

Effective teachers generally move to help students reduce anxiety when it rises to a level that threatens to interfere with positive learning. Without necessarily being aware of the theoretical implications of what they are doing, they are acting in accord with the findings of Ned A. Flanders (1951) that "student behavior associated with interpersonal anxiety takes priority over behavior oriented toward the achievement problem." In other words, students who are troubled by anxiety are concerned only about avoiding or reducing their anxiety and are not concerned with the learning task before them. Thus they are not able to develop the task-imposed discipline which is conducive to good learning and are less responsive to the pressures of group-imposed discipline. By helping students reduce the level of their anxiety, teachers are making it possible for them to become involved in the tasks of learning and are facilitating the development of more mature standards of behavior.

There is a wide variety of methods that can be used in helping students reduce their anxiety. Here are two of them. Sometimes the reduction may be accomplished through the medium of a "gripe session" whereby the group "gets its troubles off its chest," and sometimes it can be reduced through a change of scene or a restructuring of the learning situation.

Mr. Hoskins wanted his social problems class to discuss the film they had just seen dealing with the pros and cons of the development of electric power by the Federal Government, but no one seemed to have anything to say. Mr. Hoskins felt sure that this was not really so, because the film had brought out some rather provocative issues. He assumed the students were somewhat anxious about initiating discussion. As he looked about the group, it seemed to him that some of them would like to participate but were shy about speaking up. So he broke the class up into groups of six students each and had them discuss the issues for six minutes. Then he brought them together again. The discussion went much better then, because the students discovered that they *did* have something to say about the film and they were less anxious about expressing their opinions openly.

Anxiety is often difficult to identify because it appears in so many guises.¹ It may appear in a generalized feeling of resentment toward the teacher, merely because he happens to be an adult and a person in authority. It may appear in a kind of restlessness that seems to prevent the class from concentrating on anything for more than a few minutes. Or the class may be worried about some new area of subject matter that they think will be too difficult for them. Inasmuch as learning involves change, and inasmuch as change means abandoning old patterns of behavior for new ones, it is evident that some anxiety will be aroused if learning is to take place. One of the tasks of the teacher is to see that anxiety is at a high enough level to stimulate learning but that it does not grow out of bounds and become disturbing or demoralizing.

Arousing Normal Anxiety. The responsibilities of the teacher in developing normal anxiety are often overlooked, partly because our understanding of anxiety is at best incomplete and partly because we are inclined to gloss over those aspects of education that appear somewhat negative. Furthermore, we are so much aware of the difficulties resulting from an overabundance of anxiety that we fail to realize that too little anxiety can also create learning problems.

As we indicated in Chapter 9, the individual who has no anxiety lacks concern for the rights and feelings of others. He is primarily interested in gratifying his immediate needs. It is the "good citizen," child or adult, who feels anxious when tempted to do something that will injure or embarrass others. It is the individual who does not possess this normal anxiety who is a threat to the welfare of the group and who must be helped to develop the anxiety that is basic to self-discipline.

What we have been calling "normal anxiety" is a quality that appears in what is commonly called "conscience," or to use a psychological term, "superego." The superego forces in an individual's personality may become so strong that they inhibit him at every turn and prevent his making the kind of positive moves that are basic to the development of full psychological maturity. But if superego forces are too weak, the individual is unable to function adequately as a civilized human being. The basic psychological groundwork for superego development is, of course, laid down in preschool years. Even during the period of the school years, teachers usually feel that the home bears the major and even the exclusive responsibility for such personal characteristics as the development of conscience. Some research by Jacob S. Kounin, Paul V. Gump, and Bruce J. Biddle (1957), however, indi-

¹ See discussion of mental mechanisms in Chapter 6.

cates that the school contributes a great deal to the superego development of children in the age group seven to thirteen and may actually have a more powerful influence than that of the parents during this period of development. Whether the schools develop children's superegos deliberately or unconsciously, the researchers reported, "they appear to be more successful than parents in instilling attitudes toward misconduct that are more realistic and more in tune with general cultural values."

The task of maintaining the right degree of normal anxiety and aiding in the development of adequate superego structures is one that must be carried out on both an individual and a group level. Children who are otherwise considerate and sympathetic may do things that are quite heartless when they are together in groups. For example, they might tease or humiliate a child who is a member of a minority group or who is physically handicapped. Such negative behavior occurs when anxiety is too low or too high. Sometimes the normal anxiety of a group will be reduced when the proximity of an important event overstimulates and excites them; sometimes normal anxiety vanishes when one member misbehaves and initiates a kind of chain reaction of misbehavior that sweeps through the group.

The list of things that teachers can do to arouse normal anxiety would be endless. Sometimes it takes only a nod; sometimes it is just a matter of laying a hand on the shoulder of the student who is misbehaving. At other times a few words to remind students of their responsibilities are enough. The techniques themselves are of less importance than the way in which they are applied and under what circumstances. It is not always easy to gauge the situation and determine how much anxiety should be aroused. This raises the problem of where to stop. We want to arouse anxiety to the point where students have a reasonable concern about their responsibilities to themselves and to others, but not to the point where it interferes with the learning process.

It is easy for teachers to give more help than is actually needed. As we indicated earlier, we are more comfortable when we are in the driver's seat. It is difficult to permit groups to manage themselves and learn by making mistakes on their own. Furthermore, there is much that we do not know about the best ways of helping groups manage themselves, for this is one of the newer fields in psychology and education.

Teachers' Anxieties about Discipline. Problems relating to discipline are a major source of anxiety for a great many teachers, particularly for those who are just entering the field. When Lawrence E. Vredevoe² asked 3000 prospective teachers, "What gives you the greatest concern or worry as you

² Unpublished study.

plan for your first teaching position?" 2480 answered: "Discipline." However, one of the major differences between new teachers and experienced teachers is that the latter are less concerned about problems of discipline and are more concerned about ways of improving their general effectiveness as teachers. And so we say to beginning teachers: "Discipline is a problem that will worry you less when you get to be an experienced teacher."

This is probably not a very reassuring statement, as far as the beginning teacher is concerned, because he wants to know the answers to such questions as the following:

If children are continuously noisy in their seats while the teacher is busy at the board or with other groups, what is the best thing to say to them?

What do you do to keep the group quiet while one child is reading or speaking?

How do you train children to keep their hands to themselves?

What can you do to keep children from answering out of turn or all at once?

How do you handle the sassy child, the child who pays no attention to the standards set up by the class in regard to courtesy and behavior rules?

How does one cope with the child whose mind is far off from school work and who does not want to join with the group? This child is always the last to come up for reading and numbers and keeps the group waiting in other distracting ways.

What do you do with the "tattle tale"?

What do you do with the "cry baby"?

What is the best method of maintaining discipline and silence while escorting your class through the school building?

How would you answer the child who retorts with the answer, "I don't want to," when he is called upon to do something? (Breslow and Leiser, 1954)

The beginning teacher wants specific suggestions—techniques, if you like—that will enable him to handle such problems. It is difficult for him to grasp the point that discipline is partly a point of view, partly a feeling of self-confidence, partly a kind of relationship between the teacher and his class, but mostly a feeling that the class develops about its own behavior. These are the kinds of concepts that defy verbal description. They are the approaches teachers must learn through actual experience. Moreover, they are things that cannot be learned unless teachers have an open mind, a willingness to try to understand students and learn from them.

New teachers have anxieties about discipline because they feel anxious and insecure about their work. They have not had the experience of success and consequently have no assurance that they will succeed. Instead of seeing students as providing the opportunities for teaching success, they see them as potential threats. It is thus understandable how some might turn to rigid

discipline as a way of coping with their anxieties. Robert H. Snow (1963) describes what happens when teachers' inadequacies lead them to overstress discipline:

In the face of many uncertainties, the teacher may feel a desperate need for exercising rigid control within the classroom to insure that at least the outward appearance of constructive effort is maintained. When students seem orderly and attentive, it is easier for the teacher to feel assured that he is teaching successfully. Deviations from accepted behavior patterns must be sternly suppressed, because they destroy this sense of confidence. Furthermore, evidences of sloth or recalcitrance are interpreted as personal provocations, because they suggest that the teacher's services are not appreciated.

Some teachers appear to live in dread of insurrection, obsessively concerned with preserving order in the classroom at all costs. Coercive measures predominate; reproaches fill the air. Inordinate amounts of time are spent in enforcing minor regulations. The examination becomes a punitive device, chiefly intended to place students on the defensive rather than to measure achievement. The student regards the teacher not as one who guides and assists but as one who threatens and invokes penalties. A gulf widens between students and teacher. The classroom becomes an arena for opposing forces, rather than a laboratory for learning.

In some ways, telling beginning teachers how to face and deal with problems of discipline is like advising people on how to be happily married. In all conscience, we cannot say, "If you follow these rules carefully, you will have a successful marriage." But we can say: "If you can maintain an open mind, if you can love, trust, and respect each other, you will have the *basis* for developing a successful marriage." Generally speaking, if teachers like children, respect them as individuals, and are willing to take the time and trouble to understand them, they will have the basis for a good teaching relationship and the problem of discipline will very likely take care of itself. There are exceptions, of course. There are schools where students are more rebellious or more apathetic than elsewhere, and there are schools where the atmosphere is not favorable to the development of sound relations between teachers and students. Helping boys and girls in such schools to become self-disciplining may demand more skill and understanding than most teachers possess. But the basic principles that are helpful in other schools are also the ones that will work in "problem schools" when the atmosphere again becomes favorable. If students are to learn to become self-disciplining, if they are to learn the discipline that is task-oriented and group-oriented—that is, *if* the problem of discipline is to be solved—relationships between them and the teacher must be based on understanding and mutual respect.

SUMMARY

The word "discipline" is commonly used to mean "punishment," "control by enforcing obedience or orderly conduct," and "training that corrects and strengthens." Although teachers commonly agree that students should learn how to discipline and control themselves, they are inclined to enforce discipline rather than to help students develop it themselves.

Children need some control and direction to help them become self-disciplining; the amount will vary with the situation and with their level of maturity. They cannot always be depended upon to set the amount of control and direction that they will require. At times, particularly during the preadolescent period of development, they will have mutually contradictory needs to have limits set for their behavior and to challenge these same limits.

Discipline, like other aspects of the leadership role, calls for a judicious balance of "structure initiation" and "consideration," to use two terms that have grown out of research in the psychology of leadership. One example of structure initiation is the stand commonly taken by many adults to the effect that it is somehow "democratic" to treat all instances of misbehavior in the same way, without consideration of circumstances or causes. A preoccupation with orderliness and control is apparently characteristic of teachers who are perceived as cold and hostile and who are not very interested in encouraging the academic achievement of students. An understanding of causal factors is basic to the proper handling of misbehavior, but many school people are inclined to think in terms of but one kind of treatment—punishment. Although American teachers have become more permissive than they were a generation or so ago, this trend has been somewhat reversed in recent years. Some punishment may perhaps be unavoidable in the teaching-learning situation, but there is a danger in overdoing it. Students whose teachers are punitive seem to have difficulty in focusing on the more positive aspects of social control that can be learned in school contexts and are thus less able to trust the school and its teachers. Some research with kindergarten children shows that punitive attitudes on the part of teachers tend to increase the incidence of misbehavior. Some children react to punitive treatment by refusing to learn. This evokes further punitiveness on the part of teachers, accompanied by more steadfast refusal on the part of students, and an impasse is thus reached.

When students are permitted to develop conduct standards of their own, they are helped thereby to become less dependent on adults for discipline. An important factor in the development of these norms is the peer group,

which exercises greater power with each succeeding year in the life of a school child. In general, teachers have not used the peer group to any great extent in helping students learn how to control and direct themselves.

Another source of discipline is the learning task itself. The very process of becoming involved in a task or a problem has the effect of disciplining or setting limits to the individual's conduct. The greater the maturity of the individual, the easier it is for him to conform to the requirements of the task at hand. It is of course necessary for students to be motivated toward accomplishing the task under consideration before they are willing to accept the discipline it imposes.

Teachers can help students develop the emotional maturity and the motivation required for self-direction and self-discipline by "stage setting," reducing anxiety, and increasing anxiety. "Stage setting" involves planning and arranging the learning situation. Because the teacher has an idea of what is coming next, he feels secure and confident and is thus able to communicate some of this confidence to the group. Routines also have a limited usefulness in providing stability.

Although some minimum of anxiety is essential for most kinds of learning, it has a disturbing or negative effect when it is too strong. Individuals whose anxiety is at a high level are understandably preoccupied with reducing their anxiety and not with the learning tasks at hand. Hence one of the tasks of the effective teacher is to help students reduce the level of their anxiety so that they are able to direct their attention to the problems that are important for their welfare.

Helping students develop patterns of self-discipline and self-direction also involves raising the level of anxiety when they are inconsiderate or when they become involved in the chain reactions of misbehavior that sometimes sweep through groups. It is relatively easy to arouse anxiety, but hard to know where to stop. The problem is how to keep the anxiety level of the class in balance, at the point where students are concerned with appropriate responsibilities, but not to let it rise to the point where it interferes with learning.

Discipline problems are a common source of anxiety with teachers, particularly with student teachers or with those who have little experience in the field. Such problems tend to diminish in importance as teachers become more experienced, but this fact may not be very reassuring to the beginning teacher. He would like to know what specific techniques should be used in dealing with this or that situation. However, discipline depends not so much on techniques but on the willingness of teachers to respect learners as individuals and to take the time and trouble to understand them.

SUGGESTED PROBLEMS

1. Ask four or five adults of your acquaintance what they mean by "discipline" with respect to the behavior of children. Are there any similarities or common patterns in the various points of view they express?
2. What advantages would group-imposed discipline have over teacher-imposed discipline? What advantages would task-imposed discipline have that group-imposed discipline might not have?
3. How can "stage setting" or "structuring" be used to cope with problems of discipline? Under what conditions would you be inclined to introduce more structure into the learning situation? Under what conditions would you be inclined to reduce the degree of structure?
4. What kinds of discipline problems are likely to result from too much anxiety? What kinds from too little anxiety?
5. Describe some approaches whereby teachers might raise the level of anxiety in a class in a way that does not help learning. How might teachers raise anxiety in more constructive ways? In what way might anxiety be lowered without its helping learning very much? How might it be lowered in a helpful way?
6. Describe an experience in which a teacher used rigid forms of discipline on students in order to cope with his own feelings of inadequacy and insecurity. What indications are there that the teacher was inadequate? What was the outcome?

SUGGESTED READINGS

- Cutts, N. E., and Moseley, N., *Teaching the disorderly pupil*. New York: Longmans, Green, 1957. A paperback, short and to the point.
- Dreikurs, R., *Psychology in the classroom*. New York: Harper, 1957. Presents basic principles of understanding children's conduct problems, suggests ways of dealing with them, and gives examples.
- Kaplan, L., *Mental health and human relations in education*. New York: Harper, 1959. See particularly Chapter 7, "Disciplinary practices in the family," and Chapter 14, "Control and management of children."
- Kaufman, B., *Up the down staircase*. Englewood Cliffs, N.J.: Prentice-Hall, 1964. A humorous but very realistic account of an English teacher's attempt to teach creatively in a New York City high school, located in an area that is low-average, economically speaking. Her chief difficulties are coping with disorderly student behavior and the bureaucratic rigidity of the school administration.

Educational Psychology in the Classroom

- Phillips, E. L., Wiener, D. N., and Haring, N. G., *Discipline, achievement, and mental health*. Englewood Cliffs, N.J.: Prentice-Hall, 1960. A discussion of the interrelations among these three areas of educational concern.
- Redl, F., and Wattenberg, W. W., *Mental hygiene in teaching*, rev. ed. New York: Harcourt, Brace, 1959. Contains some very good passages on "influence techniques" that have been used effectively with children and youth.
- Rivlin, H. N., Classroom discipline and learning, in M. Krugman, ed., *Orthopsychiatry and the school*. New York: American Orthopsychiatric Assn., 1958.
- Sheviakov, G., and Redl, F., *Discipline for today's children and youth*. Washington: National Education Assn., 1944. A down-to-earth pamphlet, very stimulating.

12 Building on Learners' Needs and Interests



San Francisco State College—Joseph Diaz

Deficiencies and Strengths of Traditional Approaches to Education. Traditional approaches to education, as we have pointed out in the preceding chapters, are characterized by an emphasis on "structure initiation"—a high degree of direction and control on the part of the teacher. We have said that some direction and control are necessary, the amount needed depending on such factors as the maturity of the class, the emotional climate of the school, and the emotional security of the teacher. We have also pointed out that teachers are inclined to direct, control, and apply disciplinary measures more than is necessary, and that such an orientation tends to interfere with cognitive development and particularly with the formation of favorable attitudes toward learning.

In all fairness to traditional schools, however, it should be pointed out that they do meet some psychological needs of students. All schools, modern and traditional alike, offer children and adolescents an opportunity to come together and interact with one another. This is an important contribution because it provides a kind of stimulation that is vitally necessary to the social and intellectual development of young people. The traditional, as well as the modern, school also brings children and adolescents into contact with the adult world outside the home, another very important source of social and intellectual stimulation. Furthermore, the ambitious student who can accept the adult-centered goals of the traditional school (which sometimes means that he must turn his back on his peers and age-mates) finds much that is well worth learning. To be sure, the adult values that the traditional school presents are often distorted or exaggerated. The regimentation found in many traditional schools has few counterparts in adult life, unless it is in military service or in custodial institutions; many traditional schools encourage a competitiveness that is more severe than that found in most employment situations; and much of the curricular content has been selected with

more regard for its suitability to existing instructional plans than for its general usefulness and its contribution to human welfare and understanding.

Nevertheless, the traditional school often provides an atmosphere that is reassuring to the child who is looking for the kind of security that may be obtained from a tightly organized and highly predictable situation, one that will not make heavy demands on him in the way of self-direction, initiative, spontaneity, and creativity. There are many such students, and we would be less than realistic if we said that the kind of school that deviates from traditional patterns does not arouse their anxieties. The student who has especially strong needs to be emotionally and intellectually dependent on others thus feels more at home in traditional schools.

The question can be raised, of course, whether such strong dependency needs are mentally healthy. We might also raise the question regarding the value that we place on developing in each individual the capacity to think for himself and take responsibility for his own behavior. The way in which educators resolve such questions will determine, in part, the extent to which their schools conform to traditional patterns. We say "in part," because there is a lag or a gap between what teachers believe are good educational practices and what they actually do in the classroom. W. A. Oliver (1950) surveyed the educational beliefs and practices of teachers in Portland, Oregon, and found that the best twenty-five teachers got an average score of 45 on a 50-item questionnaire but averaged only 36 when their classroom practices were evaluated. The poorest twenty-five teachers scored 39 on the questionnaire and 22 on classroom evaluation. His data, which are presented in Table 12-1, also indicate that the less effective teachers tended to be older, to have been in the school system longer, and to have had less education than the more effective teachers.

TABLE 12-1. Comparison of 25 Teachers Who Ranked High on a Scale of Educational Beliefs with 25 Who Ranked Low (Oliver, 1950)

Factor	Averages for the 25 highest-ranking teachers	Averages for the 25 lowest-ranking teachers
Belief score	45	39
Classroom evaluation	36	22
Age	38	50
Years in Portland schools	8	20
Percentage with degree	72	52
Percentage on tenure	48	76

Newer Approaches to Education. Because a great many of the people involved in education, both teachers and lay people, are concerned with these and other deficiencies in the schools, they are continually adjusting and revising curricula and methodology in an attempt to find more effective ways of conducting education. Indeed, the chief function of the educational psychologist is to expedite this process of improvement by pointing out deficiencies, diagnosing causes of educational failure, uncovering unmet needs of children, experimenting with new approaches to education, and checking the results of such experimentation. As a result of the collaboration between the psychologist and the educator, curricula and methodology are continually being revised, and, what is more important, the points of view of teachers toward children and toward the learning process are generally being changed. It should be noted that these changes come slowly and that they continue to meet with much resistance, both within the profession and without, for educators are cautious and conservative people, people who must be thoroughly convinced before they try new approaches. Furthermore, there is the natural and human tendency to be reluctant to change old ways for new.

Some of the major differences between traditional and newer approaches to education have been outlined by the Social Studies Core Committee of teachers and administrators of the South Bend, Indiana, Public Schools (1948).

I. Then—"Teacher"

A few years ago the teacher did all of the planning. The children carried out his wishes regardless of their immediate interests. The teachers had been trained in the old school where absolute quiet, obedience to orders, and reciting of memorized lessons were the whole of education. Thus the experience and training of the teacher taught him to consider himself the authority and take for granted that he had all of the good ideas.

Now—"Teacher-Pupil"

Today's teacher believes that children must be given the opportunity to participate now in the kind of activities in which they will be expected to participate on the adult level. He considers himself to be a leader rather than a dictator. Today the teacher makes broad plans in advance, but he and the children plan together how they will carry out those plans. The principles of democracy are translated into practical everyday experiences of both thinking and acting.

II. Then—"One Book"

When you and I went to elementary school, teachers believed that every child in the class should be reading the same page of the same book at the same time. As children, we quickly learned that it was expedient for us to know the exact

Educational Psychology in the Classroom

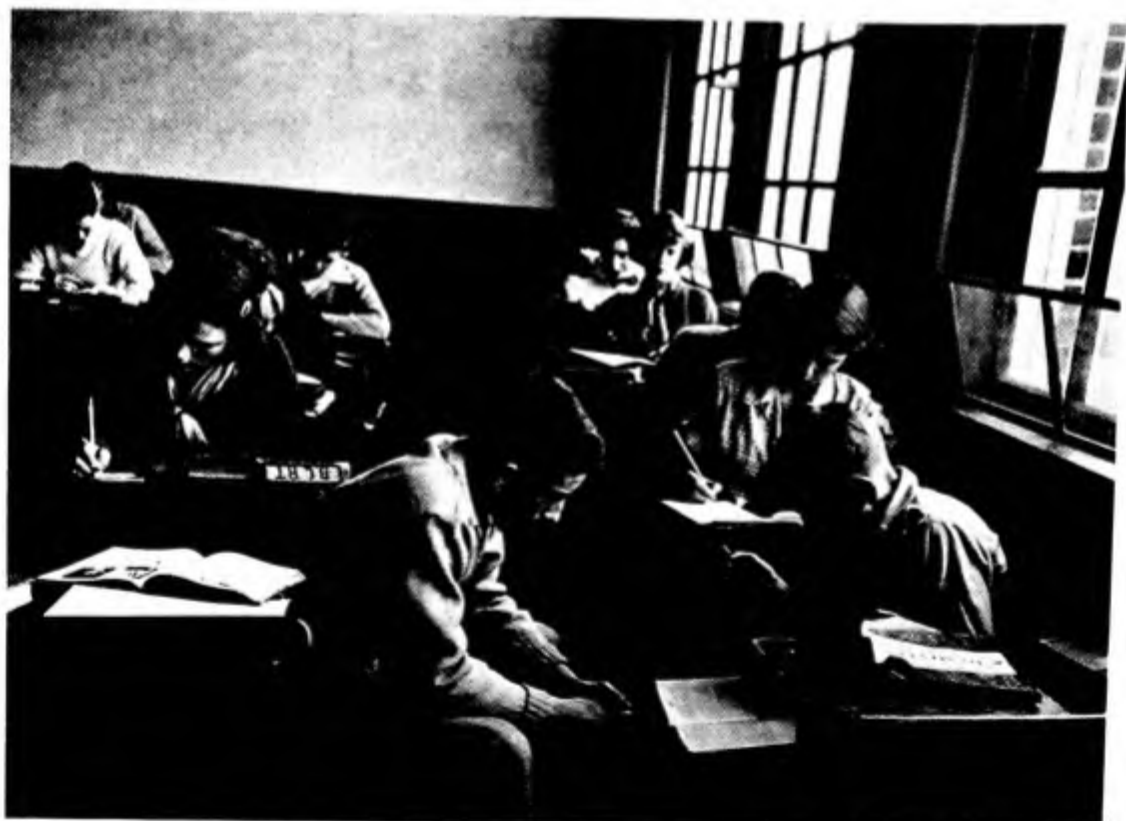
place to begin reading when "teacher" called our name. We were made to feel that the views of the writer of our one textbook were final and that he was the authority.

Now—"Many Books"

We who teach our children today also believe that reading is basic in education, but that it should not be limited to the one textbook from which they learn their basic reading skills. In social studies we provide opportunities for the children to select and evaluate materials from many books. The topics read about can be of personal interest to the child and he can do something about what he reads thus enriching mind and body. For example, the child who is interested in airplanes will acquire as much reading skill and derive more benefits from books about that subject than from a textbook in which he has no interest. He can select books which will increase knowledge, improve manual skill, and at the same time give him information which he can share with the group.

III. Then—"Read-Recite"

. . . The traditional method of [education was that of] assigning children pages to be read from the textbook. . . . [Then they were required to recite]



Standard Oil Co. (N.J.)

Students often find it easier to learn from one another than from teachers.

Building on Learners' Needs and Interests

to the teacher the identical facts which they . . . read, even though the facts . . . held no meaning for the children. Book learning was the beginning and the end of education. We failed to educate children to meet real situations with real people—to work and play together.

Now—"Plan-Work-Share"

We have come to realize that book learning is only a part of education; the greater part lies outside of books, among people. Emphasis is placed now on the ability to work in a group on problems or topics of interest. Group work is one of the newer techniques in education. The teacher as a working member of the group helps children to use their own minds, to initiate projects of common interest, to complete the tasks they set for themselves, and to evaluate the work they have done. We are helping children to acquire skills in working in groups, accepting the ideas of each member of the group as worthy of consideration, in organizing and evaluating the ideas and information, in reporting their findings to the class, and in engaging in simple activities in childlike ways.

IV. Then—"Differences"

In the past schools and textbooks have unthinkingly emphasized the differences in people which has resulted in stereotyped thinking. This is particularly true in curricula when the Dutch, the Japanese, the Eskimo are studied because of their "funny" dress and their "peculiar" manner of living. In studying the United States, for example, children got the idea that farmers always wear blue jeans and straw hats, and carry red bandanas; the American Indians were people of another era who lived in teepees, rode in canoes, and wore brightly colored feather bonnets. The Negroes were slaves who became share croppers after the Civil War and earned their living in the cotton fields of the South.

Now—"Similarities"

Now we emphasize likenesses rather than differences. Today many schools offer opportunity for the practice of democratic principles as children of all nationalities, creeds, races, and social and economic groups work and play together in the classroom and on the playground. Children learn that every member of the group has something to contribute regardless of race, creed, or social background. They learn, too, that all people work to secure the basic needs for living—food, clothing, and shelter—although they may go about it in very different ways. The way an individual meets these needs is influenced by geographic factors, availability of resources and products, and cultural background.

The newer methods in education have brought improvements, but they have not remedied all the deficiencies we noted in the more traditional approaches. Although they have brought about some desirable changes, there is much that needs to be done. Even when newer methods have resulted

in improvements, the gains are not always as great as had been hoped or expected.

For example, Charles F. Howard (1950) experimented with older and newer methods of teaching arithmetic to fifteen fifth-grade classes. At the end of the sixteen-week experimental period, the classes that had been treated to the older method (the "drill" approach) made the best showing on tests. However, three months later, after the summer vacation, the groups that had used newer methods (audiovisual aids and an explanation of the "why" of arithmetic) retained more of what had been learned than the groups using the "drill" approach. Howard concluded that his experiment showed that the learning of arithmetic was aided by both practice and comprehension.

We cite this study to show that the advantages of using newer methods are not always clear-cut. Much depends on the emotional climate of the school, the social and intellectual background of students, and the motivation of both teaching staff and students. It takes more than the introduction of improved methodology to produce the kinds of teaching and learning situations that are effective.

The Use of Audiovisual Aids. This is a topic that could be discussed just as logically under the heading of teacher-centered, as under learner-centered, approaches to education, but we are including it in this chapter because of the apparent rationale of the various audiovisual approaches. The use of an audiovisual aid, such as an educational film, implies a certain willingness to depart from tradition-bound methods of teaching. It implies, too, a certain degree of concern with improving the communication between teacher and student, a concern that tends to be lacking with traditional educators. Educators who make use of audiovisual aids are also inclined to be more experimentally minded and to make use of a wider variety of educational methods, whereas traditionally oriented educators tend to do little experimentation and to make use of only a narrow selection of teaching methods.

Research with audiovisual aids indicates that their use generally produces results superior to those obtained by conventional methods. To mention one study as an example, Kenneth E. Anderson and others (1956) found that students learned high school biology more effectively in classes where teachers used films than in classes where they were not used. Learning was even further enhanced in classes where teachers reemphasized the principles that were presented in each film.

A new, and to a large extent untried, dimension in the field of audiovisual methods is that of educational television. Many of the advantages of television resemble the advantages of motion picture film, although there is the disadvantage that school curricula have to be geared to the telecast,

both as to time and content. Some experiments that have been conducted with instruction by television show that learning is equal to or even better than that attained by conventional methods, but one study made by James N. Jacobs and Joan K. Bollenbacher (1959) of the televised instruction of children in the Cincinnati elementary schools showed that children in the middle- and high-ability groups made the most gains, while children in the low-ability groups actually showed an educational deficit. After reviewing this and other studies of the effect of televised instruction on achievement in science classes, Fletcher G. Watson (1963) concluded that so far there is very little evidence to show that such instruction provides much of an advantage over more conventional methods. He came to similar conclusions regarding the use of teaching machines and other forms of programmed materials. It may be that these negative results are at least partly due to teachers' attitudes toward experimental methods. Some of Watson's comments are worth repeating here:

As observed . . . by many experienced supervisors, science teachers are quite conservative. Many hold their positions and maintain their egos by virtue of their "knowledge of the subject." They enjoy "telling and showing" their pupils. If this behavior is made unnecessary by some type of "canned" instruction, many teachers will be obliged to change in position and importance. Even for those who will recognize and welcome their new role, this change will be difficult.

Watson puts his finger on a very significant factor that plays a determining role in the success that various types of teaching aids will have. If the teacher is open to new ideas and is continually casting about for new ways to present material and capture the interest and imagination of students, teaching aids will be genuinely helpful and will usually "work." But if the teacher uses teaching aids only when required to do so and regards them as a nuisance or even as a psychological threat, teaching aids will contribute little or nothing to student progress in learning.

Another innovation has been the use of "language labs" in foreign-language instruction. Such laboratories consist of arrangements of sound-proof rooms, tape recorders, and libraries of prepared tapes, which can be used by students individually or in small groups as a way of augmenting classroom instruction in foreign language. These laboratories do enable students to record and play back their recorded attempts to speak the language and also to hear instructional tapes. From the standpoint of common sense, it would appear that such augmented instruction would aid considerably in the mastery of a foreign language. Objective evidence that language laboratories actually do facilitate the learning of foreign languages is very meager



Audio-Visual Services, Alameda County Schools

A language laboratory in operation.

and not very conclusive (Carroll, 1963). The teaching-learning problems in this field are extremely complex, and it is difficult to set up and conduct research studies with proper scientific controls that would produce evidence on which one could base firm conclusions. In spite of the lack of encouraging findings, further experimentation with teaching methods in foreign languages would seem highly desirable. When college students were asked by the present author to rank the effectiveness of the teaching that they had experienced in various high school and college classes, foreign languages ranked fifth among the six subject-matter fields included in the survey.

Integrated Teaching. Although experimental techniques have made sketchy progress in the schools, attempts at curricular reform have had a somewhat greater degree of acceptance. The "core curriculum" is one example. Some core courses have been developed merely by combining two related subjects, usually English and social studies. Sometimes relatively little is actually changed, except that the same teacher teaches both parts of the double course, and the subject matter of each is related more closely than it

ordinarily is. Another approach is to decide what kinds of "common learnings" each student should have as the result of his school experiences. The courses are then organized around these common learnings. From what we know about the learning process, it would appear that even a teacher-centered core course would constitute an improvement over the traditional secondary curriculum, in which little attempt is made to relate various subject-matter areas. After all, learning takes place more efficiently when the learner can see relationships among the various facts and concepts that he is expected to learn. When the subject matter "makes sense" to us, we are able to learn more effectively.

However, those core courses that are organized around the interests, experiences, and needs of students would seem to have the best chance for success, inasmuch as they not only "make better sense" but are more likely to be perceived by students as worthwhile, interesting, and valuable. Theoretically, at least, such courses should succeed not only because they make better sense but also because students would be more highly motivated to participate in the learning process.

One of the many studies evaluating the core curriculum was undertaken by Bernard Schwartz (1959), who conducted a survey of 168 graduating high school seniors in Yardley, Pennsylvania. Eighty of the seniors had taken core courses in the seventh and eighth grades; the others had not. Those who had participated in the core courses scored higher than the other students in understanding of natural science, ability to solve mathematical problems, vocabulary, reading ability, overall scholastic average, number of extracurricular activities in the tenth and eleventh grades, and ratings for the following character traits: responsibility, influence, seriousness of purpose, creativeness, adjustability, industry, and initiative.

Team teaching, an arrangement whereby two or more teachers work together in teaching the same group of students, is sometimes used in connection with core courses. Such teams might be interdisciplinary, as when a teacher of American history, a teacher of American literature, and a teacher who is familiar with music and arts of the United States collaborate to teach various phases of American culture. Such arrangements permit cooperative planning, coordination, as well as integration of subject matter and methodology. On the negative side, critics note that members of teaching teams have to spend a lot of time planning and integrating their offerings (Vars, 1966). There is, furthermore, a tendency for team teachers to become more specialized in their approach. An American literature teacher with a good background in history might decide to refrain from comments on the his-

torical context of the writing that he is discussing, feeling that he would be infringing on the specialty of his colleague in American history.

Like other experimental approaches, neither the core curriculum nor team teaching can be considered as a panacea, although the rationale of these two approaches appears sound from the standpoint of phenomenological principles of learning. One recent evaluation of team teaching gives the usual set of findings: (1) measured achievement in the experimental group (the classes being taught by teaching teams) was no different from that of the control group (the classes being taught by conventional methods), and (2) students' attitudes in the experimental group were noticeably better than those in the control group. With respect to the latter finding, teachers reported that students in the experimental group showed a remarkable improvement in self-discipline and in favorable attitudes toward the school (Zweibelson, Bahnmueller, and Lyman, 1965). Thus the chief contribution of experimental programs is not so much the improvement of academic skills and acquisition of information, as it is the development of desirable attitudes—the aspect of education that is largely neglected by traditional programs.

The Involvement of the Student in the Learning Process. Education, as we pointed out in an earlier chapter, has a difficult task in competing with the attractive features of the environment outside the school. It is quite likely that many of the attempts to teach students miss their mark, because students are not interested enough to direct a significant part of their attention to the matter at hand. An incidental finding of some research with teaching machines illustrates how classroom learning can improve when the attention of students can be captured. In the study in question, the performance of fifth-graders learning Spanish with the aid of teaching machines was compared with that of a group in regular classes and another group that made use of a programmed textbook. The teaching machines were an early model that kept breaking down. The more highly trained teachers, who had been more thoroughly briefed on the machines, put them aside, sent for a repairman, and substituted other activities. Teachers with less training told the students to repair the machines and proceeded with the programmed instruction. In some classes, as much as 25 per cent of the time was spent in repairing machines. The results of the study showed that students in classes where they were asked to repair the machines showed a higher degree of achievement than did students in any of the other groups. These differences showed up at every IQ level. The researchers explained the unexpected results in terms of the fact that students who repaired broken machines evidently became involved in the educational program to a much greater extent than did students in other groups. "They became proud of their ability to keep the



Audio-Visual Services, Alameda County Schools

A field trip is a useful means of helping learners become more personally involved in the learning process and providing experiences on which classroom learning sequences can be based.

machine going. It was their machine and they wanted it to do well." Because they had more responsibility, they were more highly motivated to learn (Schramm and Oberholtzer, 1964).

One of the shortcomings of traditional educational programs is that they do not get the student sufficiently interested and involved. The traditional concept of the student is that of the individual who passively absorbs whatever learning the teacher pours into him. Because we are beginning to realize that worthwhile and useful learning does not occur in this way, we have tried to develop techniques and approaches that will get children involved in the educational process.

Even the teacher of a generation ago realized some of the values of "getting students involved" when she asked certain children to be "monitors"—to pass out papers, clean the erasers, carry notes to the principal, and so forth. This

practice gave a limited number of children a feeling of importance, of participating in the teaching as well as in the learning process. Science teachers, too, discovered that laboratory experiences were more effective than lectures, textbooks, and recitations, when it came to imparting scientific concepts and information.

During the first quarter of this century, a number of educational plans were developed that had the partial intent of involving students more actively in the learning process. Among these were the Dalton Plan, the Winnetka Plan, and the "contract" plan. The Dalton Plan transformed traditional classrooms into subject-matter laboratories, where students worked at various tasks, individually or in groups. The Winnetka Plan abandoned lectures and recitations in favor of self-instructive practice exercises and diagnostic tests. The contract plan borrowed some of the features of the Dalton and Winnetka Plans. It allowed for individual differences by permitting and encouraging students to undertake tasks appropriate to their abilities and experiences.

Although these experimental methods attracted much attention in their day and seemed to produce superior results, none of them became very popular. They represented rather pronounced departures from existing curricula and methodology; they required specially devised curricular materials; and they required teachers who either were specially trained or were experimentally minded enough to attempt a radically different scheme of instruction. Furthermore, the emphasis on individual instruction, which implies smaller classes, raised the problem of added expense. However, because the educators of the last generation were willing to experiment with such plans, today's teachers find it somewhat easier to be more inventive and original in developing curricular materials and modifying classroom methods. Furthermore, some useful features of these plans have been gradually incorporated into modern classroom practice.

Helping Students Learn from One Another. Nevertheless, the problems of how to involve learners more actively, how to adjust educational experiences to the differing abilities of learners, and how to make classroom experiences more interesting, vital, and lifelike are among the major concerns of educators today. The experimentation of the 1920s barely touched on these problems. Even today the best we can say is that we have had more success in recognizing the problems than we have had in solving them. Looking back over the last few decades, we find that we have tried to develop solutions to educational problems gradually, by revisions of the curriculum, a shifting of emphasis from subject matter to learner, and the introduction of new methods and techniques. The newer methods differ from the experimental methods of the last generation in a number of ways, but most par-

ticularly in their emphasis on groups rather than on individual children. For this reason, the newer methods seem better adapted to conditions that require each teacher to handle classes of twenty-five to forty-five or fifty students. Furthermore, educators are beginning to find that some of the most effective learning experiences occur when students interact with one another in group relationships. Alma Irene Bingham (1958) provides this illustration of how children can be encouraged to learn from one another:

As I approached Brad's desk, he looked up at me and said, "I'm almost done with my reading. I guess I am done. There's just one question I didn't find, but the story doesn't tell the answer."

I asked him which question he couldn't answer, and he shuffled his papers as he replied, "It's the one about what season of the year it is, and the story doesn't tell what time of the year."

"It does too," Marianna stated positively. "I found it."

"I looked all through and it doesn't tell," snapped Brad with equal positiveness in his voice.

Marianna looked at me questioningly and said, "Should I tell him, Miss Smith?"

I suggested that maybe we could help Brad to decide for himself what season was indicated in the story, and Marianna quickly interrupted with, "You have to look for clues."

Brad was silent for a moment, and then asked, "What kind of clues?"

"Like what kind of things happen at certain times in the year," Marianna told him.

Brad just frowned.

Marianna noted his puzzlement and came to his rescue by asking, "What happens a lot in winter?"

"Snow. Ice. We go sledding," responded Brad. "But there is no snow or sledding in the story. Oh I get it. At least I think I do," he shouted as he opened his book to the story and began to reread it.

After about ten minutes of reading, he rushed up to my desk excitedly and said, "It's spring."

When I asked him how he decided spring was the correct answer, he said that the story mentioned the leaves beginning to come out on the trees and the birds returning from the south. He was quite proud of himself because he was able to figure out the answer.

There are some things that students can learn more easily from one another than they can from adults or from books. For one thing, many students can accept correction from other children more readily than they can from adults. Being corrected by the teacher, particularly in front of other children, can be a humiliating experience, even when the correction is de-

served. Although the teacher may attempt to make the correction in a gentle and considerate manner, many students are so defensive or so easily hurt that they are likely to be concerned solely with their hurt feelings and consequently are unable to learn from the correction. When the correction is done by a classmate, there is often less defensiveness, because the classmate is not an authority figure.

Donald D. Durrell (1961) developed a program of pupil-team teaching that was installed in forty-seven intermediate-grade classrooms of the Dedham, Massachusetts, schools. Students were organized into teams of two or more members who worked on study guides prepared for use in the regular elementary school subjects. Each team had a scribe, who recorded responses made by other team members. Teachers set the learning tasks, decided on the make-up of the teams, analyzed and evaluated achievement, and decided how much time to spend each day on team learning and on all-class activities. The teacher also disciplined when nonworking noises appeared in a group, usually by separating pupils and having them work alone on the team task. Although some teachers resisted at first, most of them came to develop positive feelings toward the program. On an anonymous evaluation questionnaire, they rated the spelling, arithmetic, and reading programs as "superior" and the social studies and language arts programs as "good." Anonymous returns from parents were definitely favorable, with 95 per cent reporting themselves "very pleased" or "satisfied." Attitudes of students toward school subjects showed favorable changes in the fifth grade, although there were no changes in the fourth and sixth grades. An evaluation of the quality of teaching by outside raters showed a marked improvement during the period of the experiment. Students in the experiment in general made significant gains in achievement, as contrasted with students in classrooms that were taught along more conventional lines.

A laboratory experiment to test the effects of teamwork on the learning of German vocabulary showed that students taught by other students learned more than those who studied by themselves. Pairs of students who switched teacher-student roles halfway through the experiment did not do as well during the experiment, but showed superior retention in the eighth and ninth week after the experiment (Myers, Travers, and Sanford, 1965).

Although pupil-team learning seems to have the advantage of facilitating achievement in subject-matter competence, there are other reasons for using pupil-to-pupil methods. For one thing, there is today a widespread concern about teaching the values and methods that are consistent with life in a democracy. Trying to teach democratic values and methods by lecture, assignment, recitation, and quiz does not produce the best results. The research that

we have cited in this and previous chapters indicates rather clearly that it is more desirable to *involve* students in situations where they may have experiences that develop the desired attitudes and feelings.

The "Activity Program." The kind of changes that schools have introduced into the classroom in order to bring about the results we have mentioned can be rather loosely grouped together in what is termed the "activity program." The activity program is characterized by flexibility both in the allotment of classroom time and in the assignment of learning tasks. Even the seating arrangements are flexible; instead of fixed rows of desks, there are chairs and worktables that can be shifted around for any of a variety of purposes.

There are several methods that are commonly used in activity programs. Among them are projects, teacher-pupil planning, and group discussion.

J. W. Wrightstone (1938) compared some five hundred elementary school children from traditional schools and from schools where the activity program predominated. He found that children who participated in activity schools were equal or superior to children from conventional schools in reading, spelling, language, and arithmetic achievement. However, activity schools have much broader objectives than mere subject-matter achievement; hence Wrightstone found that he had to develop special tests to measure attainment in the newer goals. His tests showed that children from activity schools scored higher in such fields as knowledge of current affairs, honesty, cooperation, critical thinking, breadth of interests, and creative ability as expressed in art and in writing.

The Project Method. Projects are of many types. They may consist of curricular units dealing with such areas of interest as transportation, communication, and weather, or they may be problems growing out of the experiences and interests of students. One of the earliest experiments with the project method was reported by Ellsworth Collings (1926), who described an experimental program carried out in a rural school in Missouri a generation ago. The school day was taken up with four kinds of projects: story, hand, play, and excursion. Story projects were concerned with learning to enjoy and appreciate the story in its various forms: oral, song, picture, phonograph, or music. Hand projects were attempts to represent ideas in concrete form: building rabbit traps, preparing cocoa for school lunch, or growing cantaloupes. Play projects enabled children to engage in group activities such as games, folk dancing, and dramatic activities. Excursion projects had the purpose of enabling children to study practical problems at first hand. The experimental program was continued for four years, during which time the children studied the causes of frequent cases of typhoid fever on one of the farms in the district, the making of molasses, the canning of tomatoes, the



National Education Association—Carl Purcell

Much of the learning that takes place in an activity program occurs incidentally but can be very important—such as good work habits.

operation of the juvenile court, and a wide variety of similar activities. It is important to note that children were also expected to acquire the usual knowledge and skills that are supposed to be attained in the traditional school program.

When the performance of students from the experimental school was compared with that of students from other nearby schools, it was definitely superior. Eighty-five per cent of the children from the experimental school graduated from the eighth grade, as compared to only 10 per cent of children from nearby traditional schools. Parents were more interested in the school, too. A much greater proportion of parents visited the experimental school than was true of the traditional schools.

The way in which the project method functions is indicated by this anecdote from Alma Bingham's pamphlet on the problem-solving method:

We needed bookcases in our room and decided to build them. One little girl's father who owned a lumberyard said he would supply the lumber if we would tell him how many feet we needed.

Two of the boys volunteered to measure the space where we decided the bookcases would be put, and figure out how much lumber was needed. They soon met with difficulty, though. Neither one of them was very good at arithmetic, but they were both eager to do the measuring.

The space was three feet long, and they used a six-inch ruler to measure it. One of them said, "Hey, this ruler only measures inches. Juanita's father said to tell him how many feet of lumber we need. How do we get it into feet?"

The problem was presented to the rest of the third graders, and the two boys found there was more than one way to solve it. We solved it with a yardstick, with a foot-long ruler, and with the ruler that measured only inches.

THE USE OF GROUP METHODS

Promoting the Major Objectives of Education. One of the "frontier" areas of education that psychologists and educators are just beginning to explore is the use of the classroom group in promoting some of the major objectives of education. By major objectives we mean some of the broader objectives that are basic not only to the developmental tasks faced by children and youth but also to the acquisition of specific skills and information. Examples of such basic objectives are the ability to think critically and constructively, the development of self-discipline, the ability to work with others cooperatively and effectively, and the willingness to accept responsibility for oneself and others. These are objectives that appear as by-products or as the incidental outcomes of subject-matter competence in many educational curricula. In some schools they are even taught in a formal manner, like any other academic subject.

As twentieth-century educators became concerned about the relative inability of teacher-centered methods to motivate students in the direction of the attainment of these broader objectives, they devised experimental programs of instruction. Although many of these programs made use of large and small groups, their chief focus was on the individual student. It is only within recent years that attention has been directed to the deliberate use of the psychological forces within the group in the attainment of educational goals. The research that psychologists have conducted in the field of group processes during the last two decades has helped bring about this change of emphasis.

What educational psychologists are discovering is that motivation for learn-

ing is based on attitudes and that attitudes are to a large extent shaped by psychological processes within the group. If the classroom group develops attitudes that are consistent with what the teacher or the school is attempting to accomplish, the chances are that its members will perceive the problems presented by the curriculum as interesting or valuable and will therefore attempt the solution of such problems. If the prevailing norm is one of hostility, cynicism, or apathy, however, most students will be inclined to resist any attempts to promote positive learning. Any progress that a class makes in the direction of the major or subsidiary goals of education will thus depend in large measure on the extent to which group norms permit and encourage members to become involved in the educational process.

Research studies that we have discussed in this chapter show how positive attitudes toward educational goals are more effectively developed by teaching methods involving the active participation of the classroom group. To cite further research, a study by K. M. Miller and J. B. Biggs (1958) showed that undirected group discussion led fifteen-year-old boys to develop attitudes that were significantly more tolerant and accepting of other racial and cultural groups. The strength of the "group effect" on the attitudes of individuals is also indicated by the results of an experiment conducted by William A. Scott (1957), who induced seventy-two subjects to participate in debates on three different issues, taking sides opposite to those they had indicated as their own. Half the subjects were "rewarded" by a purported vote acclaiming them as the better debaters, and the other half were told that they had lost the debate. The majority of the "winners" changed their opinions to conform to the side of the argument that they had been presenting, but the "losers" tended to maintain their original opinions.

Group Relations in the Classroom. The teacher who wishes to help the classroom group develop norms and standards that are favorable to learning does not have an easy task. For one thing, the traditional philosophy of education that appears to have a kind of a normative power over the teaching profession makes it difficult for individual teachers to "break the pattern" and try some of the newer techniques. Furthermore, each teacher needs to experiment with a variety of group methods before he finds the ones that are personally "comfortable" for him and are appropriate to the kind of goals that he is attempting to attain in his classes. Actually, this is not a disadvantage, for evidence shows that continued experimentation with educational methods is one of the best safeguards against slipping back into older, more rigid patterns of teaching.

Here are some basic assumptions developed by Jean D. Grambs (1953)



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Overcrowded conditions make the use of any techniques of group learning very difficult.

that might serve as helpful guides for teachers attempting such experimentation:

1. The relationships of children to each other, the feelings of acceptance or rejection, materially affect the kind of learning they do, the attitudes toward learning that they develop.

2. A good learning situation is one in which these feelings of children are taken into account in organizing work and study groups, play groups, and individual work.

3. The pattern of interaction, the ways in which one child moves into leadership one day and is a follower the next; the growth of antipathies toward seem-

ingly normal youngsters; the group code that governs what is done or not done—these are part of the teacher's concern in working with students in a classroom.

4. There are ways of finding out about the structure of the child society which the teacher needs in order to gain access to this hidden world [i.e., sociometric methods].

5. No class becomes a genuine group except for short periods of time when it has successfully accomplished a class goal through the efforts of the subgroups in it.

6. Every class is made up of many small natural units built from mutual need, propinquity, interests, and the "X" factor that makes one person like another.

7. The teacher creates unity of effort and orderly learning situations by working with the subgroups much as a symphony director works with the instrumental groups in the orchestra; each is different, each is composed of different numbers of persons, and they play different instruments; together they complement, supplement, and harmonize.

8. Group skills develop in individuals as they are helped to see themselves objectively in their group relations. Discussions of leadership roles, member roles, things that help the group move forward, things that interfere, and the process of problem solving are essential.

9. The relationship between classroom group living and out-of-school group membership must be made explicit. Different types of group belonging and group identification must be spelled out with the children, many times, in many different situations, and at each grade and age level.

The assumptions proposed by Grambs not only are basic to the techniques and methods we are presenting, but also constitute a redefining of the traditional role of the teacher in the light of recent research in the field of group processes.

However, the last point in Grambs' list deserves special emphasis, because the way in which these basic principles should be applied by teachers will vary in accordance with the level of maturity of the class. In general, group work with younger children requires a great deal more teacher participation than does group work with adolescents. For one thing, young children have a shorter attention span and are more interested in expressing their own ideas and feelings than in listening to others. Although there are great variations among groups of older children with respect to their ability to function effectively in groups, they need much less control and direction than younger children do.

Group Discussion. The oldest and most basic form of group participation method is the class discussion, a technique that may range from the teacher-directed, teacher-centered "Socratic method" to the free, relaxed, and permissive "brainstorming." Brainstorming is primarily a problem-solving technique



Charles M. Schulz, United Feature Syndicate. (Reproduced by permission.)

in which a small group of individuals is asked to produce as many solutions as it can without regard for quality or rationality. The group is not allowed to criticize any of the proposed solutions and is instead encouraged to use one another's ideas as starting points for other proposals. The inventor of the process, Alex F. Osborn (1957), claimed that group brainstorming enables individuals to produce solutions superior to those that they would produce if they worked alone. However, when this claim was put to the test, by having individuals work half of the time in a group and half of the time alone, it was found that they were more creative when they worked alone. However, some support for Osborn's theory turned up in the finding that those individuals who had brainstormed in the group *before* they worked alone were more productive than those who worked alone before they participated in the group (Dunnette, Campbell, and Jaastad, 1963). Evidently, participating in a group had some kind of facilitating effect. This interpretation was confirmed by further research, which showed that individuals tended to be more creative and more productive after brainstorming than they had been before (Lindgren and Lindgren, 1965a, b).

Group discussions not only have a stimulating effect on cognitive processes, but they also enable teachers to create situations that open up channels of communication and improve morale and group cohesiveness. This has been shown by research with classroom groups comparing leader-centered with group-centered methods. Members of group-centered units engaged in more verbal interaction and discussion and developed a greater liking for one another (Bovard, 1951).

It is evident, then, that the most effective kinds of class discussion will involve the members in an interchange of ideas with one another rather than with the teacher. The most elementary form of discussion is one in which the teacher directs questions to students and then discusses their answers. This is really a variant of the traditional lecture-recitation method. A somewhat more effective plan is for students to direct questions to the teacher. This still means that the students talk a little and the teacher talks a lot. Many, if not most, discussions do not get beyond this stage, partly because

teachers have so much to say and feel more comfortable when *they* are talking, partly because students have been educated by traditional methods in traditional classrooms and have learned to prefer to have the teacher take the initiative and responsibility, and partly because teachers do not use any techniques to help students move on to a more effective pattern of discussion.

One of the ways of breaking out of the second stage of discussion is for the teacher *not* to answer a student's question but to throw it to the group, saying, for example: "Would anyone like to try to answer Bill's question?" Or, "I could comment on this, but I would rather hear what some of the rest of you think," or, "There are a number of points of view that people hold on this problem. Does anyone know what some of them are?"

Often the teacher can keep from being the target for every question by partially withdrawing from his position as discussion leader. One way he can do this is to assign himself the task of writing down important points on the blackboard as group members bring them up. This has the added effect of giving students the feeling that their contributions have been accepted. The teacher may also assign the position of discussion leader to one of the students and sit off in one corner of the room.

The success of classroom discussions can be enhanced if participants are seated in a circle or a hollow square so that everyone can see everyone else. Talking to the back of someone's head, or listening to someone whose face cannot be seen, seems to have a dampening effect on participation.

The leading of discussions is a difficult art, but one well worth developing. Teachers have to experiment a while, sometimes for a number of years, before they develop techniques that are both effective and comfortable. Experimenting is also necessary because certain methods will work with some groups but not with others, even though the students may be of similar age and background. And the methods used with younger children are, of course, quite different from those used with older ones. For one thing, very young children are more concerned with self-expression than they are with listening to the contributions of others. This does not mean that discussion should not be used in the lower grades but rather that discussion should be used in a different way. Learning to listen to others is an important aspect of developing social maturity.

There is no lack of problems to discuss. Robert H. Bauernfeind (1951) asked three hundred children in the fourth, fifth, and sixth grades to write essays on the question, "What Are Your Problems—the Things That Bother You—the Things You Worry about?" Here are two of their essays that are strongly suggestive of leads for fruitful classroom discussions:

One of my problems is trying not to fight. I hope I don't like to fight too much. I fight with my sisters but not my friends. Also I fight with 3rd, 4th, and 5th graders. Another one of my problems is blowing my money. I make about \$4.00 a week. I put all my money away. But when I want something I get my money. At the end of the week I haven't any money left. Then I wish I hadn't spent it. Yet each week I keep spending. Also I get into a crabby mood and get my friends, family and others mad at me. I have tried everything to stop me. When I get crabby I get very mad at people. I sure wish I could get these off my mind. . . .

I worry about tests in school, mostly geography tests. I lay awake nights thinking about my health and the condition of my teeth. I worry mostly about my school studies. I worry about things that I was suppose to have done and didn't do. I also worry about things I've done wrong and haven't told anybody about.

Bauernfeind also asked the children to check a problem inventory. The three items most commonly checked were: "It is hard for me to pay attention in class," "I'm afraid of making mistakes," and "I wish I could be more calm when I recite in class."

In other words, the school situation was the chief source of problems for these children. Bauernfeind suggested that problem-solving experiences be included in the curriculum by having the teacher ask the class several times a week: "What problems do some of you have that you would like to tell about?" Discussions might then center around possible solutions for the problems that children have raised.

Most of the problems that students will bring up in this way have sufficient common appeal to serve as the basis for stimulating and rewarding discussions. They will be problems relating to the school, parents, brothers and sisters, and getting along with others. However, there are also advantages in going outside the personal experiences of the members of the class and bringing in new ideas, impressions, and concepts. Audiovisual methods are particularly valuable in providing *common experiences* that can serve as a basis for discussion. If all children in a class have been on the same field trip, visited the same museum, heard the same recording, or seen the same film, they can pool and compare their impressions and perceptions. Following up an audiovisual experience with a discussion helps to deepen and enrich the learning that results. Discussions help review important aspects of the experience, correct misapprehensions and misunderstandings, and provide a broader and more complete picture of the entire event.

It could be argued, indeed, that films and other audiovisual aids should always be followed up by discussion, in view of the fact that discussion contributes much to enhance the learning stimulated by the audiovisual aid.

L. L. Mitnick and Elliott McGinnies (1958) used an antiprejudice film, *The High Wall*, with twelve groups of high school students. Half of the groups saw the film and participated in a discussion about it, and the other half saw the film and had no discussion. Although the ethnic prejudice of all groups was reduced by the experience, as indicated by tests given a month later, the groups that had participated in the discussion were more significantly affected by the experience. Furthermore, those who had actively participated in the discussion learned more than those who had not.

The Use of "Buzz Groups." One difficulty with free discussion is that there is a tendency for a few students to dominate the discussion and for the remainder of the class to participate only occasionally or not at all. In a study by Jersild and others (1941), there was less equality of participation in the activity classes. In the traditional classes, however, teachers were able to get a broader spread of participation by directing questions at students, whereas the teachers in activity classes were inclined to put discussion on a voluntary basis.



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Panel discussions give students a chance to organize and communicate ideas to a critical and demanding audience and to participate more actively in the teaching-learning process.

The problem of how to spread participation and still maintain conditions of free discussion is not an easy one. Some teachers present it as a problem to be discussed by the class: "How can we make it possible for more of us to participate in our discussions?" Others use a "panel-discussion" method, with a complete change of personnel on each occasion.

However, one of the most effective methods of spreading participation is the "buzz session." Jean D. Grambs (1953) describes how buzz groups were used by one teacher:

The draft came up for discussion in one English class. The teacher noted that there was considerable concern on the part of the class. In fact, some extreme statements were being made about the unfairness of drafting the boys and not drafting the girls. Mrs. Troy, the teacher, decided that the moment was an excellent one to get the class involved in a buzz session. Everyone wanted to talk, but there just wasn't time for them all. So she quickly summarized the discussion, pointed out the issue, and then assigned each student [to] a group made up of those classmates sitting nearest to him. In this fashion she had both boys and girls in each group. But even more, she had been able to get the two isolated Negro students in different groups; she had separated the closed clique made up of the girls who belonged to the same Methodist youth group, and they were now talking away just as excitedly to others as they usually did in their closed corner of the room. She had given the one Jewish boy in the class a group of three others to talk with. When each group reported she summarized their findings. The discussion proceeded in a calmer fashion than at the beginning of the hour. And Mrs. Troy, as she commented on the total experience, pointed out to the class how well they had worked in their little groups, how easy it was to talk to others when one had an important point. She felt she had begun to lay the foundations for later more intensive study of working together in groups and in understanding and accepting each other in spite of social group differences.

Buzz groups are also helpful as "warm-up" devices. Some classes have difficulty in getting started on their discussions, perhaps because the class members are shy, or perhaps because they are afraid to say something that might be wrong. Buzz sessions also help a classroom group to become involved in a new subject. Perhaps the group thinks it has no interest in, say, highway safety. But if they have a chance to break into small groups to discuss the subject, "What can we do to make our highways safer?" latent interests will be developed that will carry over into the larger-group discussion.

Buzz sessions can be easily initiated by stating a problem (preferably in the form of a question), writing it on the board, breaking up the class into groups of five or six, and suggesting that they develop the main issues. The teacher should emphasize that only five or six minutes will be allowed for this

phase of the discussion. During this period, the teacher strolls around the room helping groups who are confused by the new technique or who do not understand what is expected of them. This period also gives the teacher an opportunity to pick up some clues as to the probable direction the discussion will take when the entire classroom group is reassembled. He can also learn something about the students in his class and how they function in a small, informal situation. During this period, the teacher should also designate one student in each group whose task it will be to report the conclusions of his group during the general discussion period that follows immediately.

At the end of the five-minute period, the class is reconvened, and the teacher, or student chairman, calls on each of the reporters in turn. Discussion and comment should be postponed until all groups have had a chance to make their reports. It is often helpful to write points on the board as they are presented by reporters.

The next step depends on the discussion leader. He can ask the class to indicate what the trends are in the thinking of the small groups or he can briefly summarize them himself. It usually does not matter which approach is used, as long as the problem is turned back to the class for general discussion. In any event, a short summary by the teacher at the end of the class period is helpful in bringing out the basic issues and in showing how they are related to one another.

Committees. Committee work can also make major contributions to the major goals of education. Like the buzz sessions, committees enable a larger number of students to participate than do large-group discussion methods. Furthermore, they may aid in the development of a wider variety of skills and activities. Committee-work projects can also be developed through teacher-pupil planning. As teacher and students discuss the project they have decided to undertake, they break it down into tasks or groups of tasks that can be assigned to committees. When the committees are organized (preferably on a volunteer basis), they may break down their assignment into further subdivisions of tasks that can be undertaken by the individuals who comprise the group.

The amount of guidance that students will need in committee work will differ widely from class to class and from one age group to another. Like the other group methods that we have discussed, the supervision of committee work makes many demands on the teacher. He must give each committee enough help so that they will not become too discouraged, but not so much that the project becomes the work of the teacher rather than of the children. Knowing where to draw the line between these two is not easy. The teacher who uses group methods must expect some failures, but if he and the group

can learn through these failures, as well as through their successes, the experience will have been worthwhile.

Committee projects can also be used to change the social structure in a classroom. The typical class in the middle and upper grades usually contains some rather tightly knit, exclusive cliques, as well as some children who are ignored or rejected by other members of the class. This kind of social structure prevents the classroom group from being cohesive, which, in turn, affects the ability of its members to communicate and to develop good morale. F. M. McClelland and John A. Ratliff (1947) experimented with a ninth-grade homeroom by setting up group projects in which children who had been ignored or rejected were given positions of responsibility. Subsequent sociometric testing indicated that there was a lessening of the tendency for students to concentrate their choices on a few leaders. In other words, more individuals were chosen and the cohesiveness of the group had been increased. Furthermore, voluntary participation in activities increased.

Using Group Methods Effectively. Hilda Taba (1951) makes the following points with respect to the use of group methods:

1. Working in groups requires new skills, and neither teachers nor children will learn these skills all at once. Therefore, working with groups requires experimentation and is never smooth at the start.
2. Useful work with groups needs to be planned both in the light of the content to be used and the processes to be employed. We must remember that it is important to teach useful ideas while carrying on group processes. Without such content, group processes are empty tricks.
3. Productivity of groups depends both on the feelings group members have about each other and on the skills they have to carry their jobs forward.
4. Group skills are learned by experiencing them and analyzing them. They cannot be learned merely by talking about them.
5. All jobs in the classroom are not group jobs. Many things need to be done by individuals separately, or by the whole class as a collection of individuals, but at the same time.

Although group methods are finding increasing use even in courses that bear traditional labels, they are employed most extensively, of course, in the newer types of courses and curricula: activity programs, project methods, human-relations training, and intergroup education. The latter two types of courses have much in common: they are concerned with developing better understanding, tolerance, and acceptance. Intergroup education is perhaps more specifically aimed at reducing prejudice, whereas human-relations training has a somewhat broader scope—that of understanding human motivation and developing better ways of living and working with others. The following

Educational Psychology in the Classroom

record of a classroom discussion demonstrates the kinds of learning that result from such classroom experiences, as well as the approach one teacher used to draw children out and get them to talk about themselves and their feelings.

Throughout the year the children in this class had learned a great many things about human behavior. They had learned to find causes for various ways of behaving. They had come to realize that one kind of behavior stimulates and calls forth other kinds of behavior. Previous to this particular sequence the class had been talking about how family members help each other and now they were discussing what mothers do to help.

Teacher: Most of our reading and discussions have been connected with ways we help. There are lots of ways we help. There are lots of ways other people help us, too, and I think we might consider some of them. Who helps you most in your house? (Most of them answered "Mom" or "Mother" or "Mommy.") What are the things Mommy does to help you?

Ray: She keeps our house clean and cooks our meals.

Marion (new pupil): She washes and irons our clothes.

Frank: My mom won't let nobody hurt me. I run home, and she says, "You let him be." Then the kids run 'cause my mom won't take no sass.

Marion: Yeh, Miss Kenney, that's what he does. He always runs home. Lots of times we don't mean nothin', but he runs home and tells his mom we pick on him. Then she dares us to hit him.

Ethel: He's an awful tattletale, Miss Kenney. Just like he was to you in the first part of the year, but now he don't tattle 'cause you always asked him what he done. He don't like to tell that. I think his mom would help him more if she did what you do 'stead of always thinking we're mean and that Frankie didn't do nothing.

Teacher: Frank, what do you think about it? Maybe your mother would help you more if she helped you meet your own problems instead of protecting you.

Frank: But, Miss Kenney, I can't fight. My mom says if I fight, she'll lick me, and she would, too. She licks real hard, too. She makes me tell her.

Carl: She's 'fraid Frankie would get hurt. He would, too, 'cause he can't fight worth nothin'.

Frank: That's right, Miss Kenney. I always get beat up.

Teacher: But would Frank have to fight to hold his place with you?

Betty: Yes, Miss Kenney. I think he would. All the boys call him Sissy, so I think he'd have to lick some of 'em, and he just can't.

Jean: Maybe if Frank didn't do things to make them pick on him he wouldn't have to fight them.

Arthur: You don't understand, Jean. He don't have to start nothin'. Some of those big boys start fighting him soon as he comes out, 'fore he ever does anything. Then he runs, and they tease him more.

Regina: Well, I don't think his mother is helping him, letting him run home to her. He'll never learn to play.

Ralph: Frankie, why don't you come over and play with me and Dick for a while? Then maybe they'd forget to fight you when you went back.

Frank: My mom won't let me cross the boulevard except when she's with me or to come to school.

Dick: Would she let you come if we went and got you?

Frank: Maybe.

Ralph: Then let's do that next Saturday.

Dick: All right, Ralph. Do you want us to, Frankie?

Frank: I guess so. (Frank's attitude on protection changed from bragging to questioning.)

This plan to go and ask Frank's mother to let him play in someone else's yard was actually carried through. It was interesting that these fourth-graders recognized what the real problem was: how his mother's protection had made Frank a sissy.

Experimental Programs. Since World War II a number of experimentally minded educators have developed programs built around the use of group methods in the classroom, with special emphasis on human relations and problems of mental hygiene. Here are some examples. H. Edmund Bullis, in collaboration with Emily E. O'Malley (1947, 1952), has developed junior high and elementary school curricula designed to deepen understanding of human relations. These curricula have had extensive use as part of the Delaware Human Relations Class Program and have also found acceptance in cities throughout the United States and Canada, as well as in three demonstration schools in Western Germany. Ralph H. Ojemann and his co-workers (1950) at the University of Iowa have experimented with curricula designed to help elementary school children develop an awareness of and an interest in the causal factors underlying human behavior. H. S. Bankston (1953) has reported on human-relations programs promoted by the Mental Health Education and Guidance Sections of the Louisiana State Department of Education. Samuel I. Spector (1953) conducted an experimental program using group methods in an eighth-grade class in New York City. He reported a gain of 46 per cent in social acceptability, as measured by the Ohio Social Acceptance Scale, over a period of five months. A more elaborate study of social acceptability was conducted by Sheldon Rosenthal (1952), using experimental and control groups of Negro children attending the fifth grade of a school in the Harlem district of New York City. The children came from a very low socioeconomic level, their average IQ was 90, and the average re-

Educational Psychology in the Classroom

tardation in reading and arithmetic was one and one half to two school grades. During the experimental period, the group participated in a classroom program that was free and permissive:

Throughout the term an attempt was made to develop a cooperative, democratic attitude in the setting of a permissive atmosphere. The pupils were encouraged to help each other in classroom activities, and cooperation was not interfered with during written exercises. Group activities were initiated, ranging from building of classroom furniture to committee research. The pupils planned their day's work, and held elections each month for classroom officers, who, by and large, were responsible for classroom discipline. The class worked out a set of rules for governing the group and each pupil in the class had a special classroom function to perform. These functions or jobs were changed every two weeks so that each child would have opportunity to experience each job. Major decisions were always made through classroom discussion and vote, and the children were permitted to change their seats as often as they wished, providing there were no major obstacles. An "I don't agree" box was nailed onto a wall in the back of the room and was opened each week. There was an average of five or six notes each time the box was opened, and the class attempted to iron out each problem that arose.

Classroom movement was seldom restricted, and the children had unhampered access to all classroom materials. Various trips were made for the purpose of seeing how other people lived and worked, and these included trips to Columbia University, the 42nd Street New York Public Library, Bronx Zoo, Morningside Heights, a neighborhood exhibit of children's school work, a puppet show in another school, the Hudson River, and Grant's Tomb. On three occasions the class went into the street and park to play. The boys formed a punch ball team and played another class during the physical training period.

Activities in the classroom included phonograph music during quiet activities such as free expression, drawing and painting. Spontaneous classroom dramatizations about history added to the socialization of the groups. . . .

Thirteen lessons were devised for the purpose of helping the children to develop an understanding of themselves and others. They covered such diverse topics as "All Minds Are Different," "Rejection," "Withdrawal," "Knowing Ourselves," "Frustration," and "Should We Always Fight Back or Should We Sometimes Give in?"

Figure 12-1 shows some of the results of the experiment. At the beginning of the period, 31 per cent of the pupils in the experimental group were *disliked* by more than ten children, and an equal number were *liked* by more than ten; at the end of the period, the proportion *disliked* by more than ten had been reduced to 8 per cent, and the proportion *liked* by more than ten had been increased to 50 per cent. A personality test administered before and after the period showed gains in adjustment for the experimental group, but

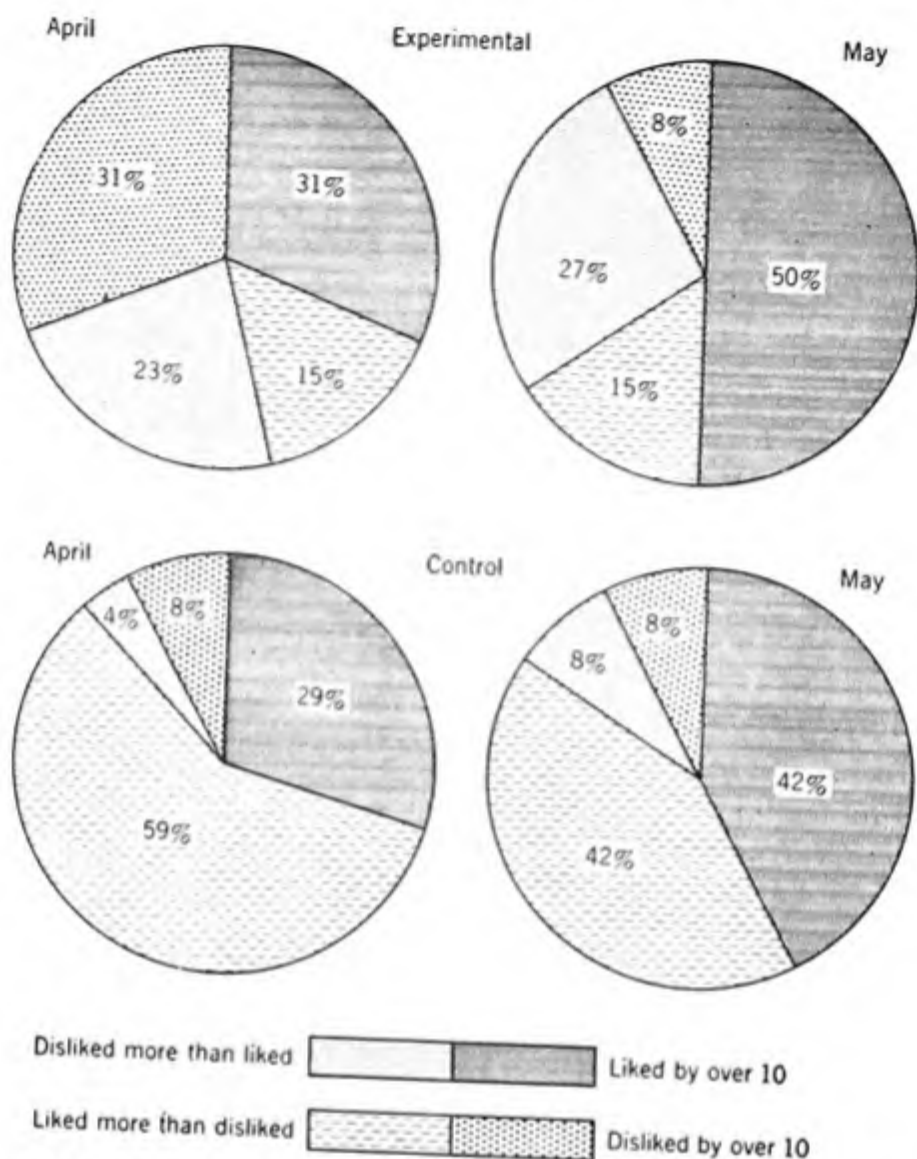


FIGURE 12-1. Changes in the attitudes of children toward one another in a group-methods class, as compared with a "control" class. (Rosenthal, 1952.)

no essential change for the control group. The greatest improvements were in the areas of "Sense of Personal Worth" and "Social Skills."

Of the several experimental programs that we have described, probably the "causal" approach of Ralph H. Ojemann and his associates (1955) has had the greatest amount of continuous evaluation. Instruction in the causal approach to understanding human behavior is now offered by the Preventive Psychiatry Program of the State University of Iowa. Another study by Rolf E. Muuss (1960) of the emotional adjustment of fifth- and sixth-grade children in the program showed that they had less anxiety and insecurity and were in generally better mental health than were a matched group of children who had

not participated in the program. Like the other experimental educational programs that we have described, the Preventive Psychiatry Program's results appear in the form of attitude changes in the desired direction.

THE PRESENT STATUS OF LEARNER-CENTERED METHODS

Criticisms of Learner-Centered Methods. It would be unrealistic for us to say or even imply that the introduction of newer methods of education has made much more than a start in solving the problems that the school must face. As a matter of fact, the introduction of activity methods has created some rather acute and difficult problems. For one thing, they call for the development of new and unfamiliar skills on the part of the teacher. More traditional approaches to education require principally that the teacher know his subject matter thoroughly and maintain control of the class. Today's teacher must not only know his subject matter but must also understand the individual and group behavior of children. Furthermore, he must be able to adjust a variety of methods to the needs of the class. As if this were not enough, he must practice these new skills and maintain this flexibility surrounded by a climate of community opinion that is often unfriendly to what is popularly known as "progressive education."

Because activity programs permit greater freedom, traditionalists have claimed that "children are permitted to run wild" and that "children decide what they will learn and whether they will learn." There probably have been classrooms where teachers have abdicated control and responsibility to children, excusing themselves on the ground that they are practicing "progressive education." What this shows is that there are inadequate teachers among the "progressive" members of the profession, just as there are inadequate teachers among the traditionalists. If children run wild in a classroom, this is evidence that teachers and administrators either do not understand children or are unable to translate their understanding into practice. As Rudolf Dreikurs (1952a) says, working with children necessitates both kindness and firmness—kindness out of respect for children, and firmness out of respect for oneself.

However, what traditionalists are probably objecting to is the greater freedom that students have in modern classrooms. Teacher-centered education requires a silent, attentive student, a student who speaks only when spoken to, who leaves his seat only when given permission. Traditionalists feel that without these conditions the result would be chaos. On the other hand, teachers using activity methods believe that there is a world of difference between the chaotic classroom and the group that is busily, if somewhat

noisily, engaged in working on projects. There is a difference, they say, between "busy noise" and "noisy noise," or noise for the sake of noise.

The public appears generally to believe that instruction in the schools today is characterized by activity methods. However, the facts are that the activity approach to teaching is neither as widespread nor as accepted as is popularly believed. Although a few schools have embraced the philosophy and point of view of the activity method wholeheartedly, most have either rejected it or adopted it only in part. A common situation is for a school or a school system to introduce some activity into its classrooms without making any essential changes in its traditional subject-matter-centered and teacher-directed approach to education.

The greatest use of the activity approach is of course made by kindergarten and nursery school teachers. Probably most of the instruction in the first three grades is more or less characterized by activity methods, but it is very likely that not more than half the teachers in the intermediate grades make very much use of activity. The higher the grade, the more formal the learning situation tends to be. Education in primary and preschool years tends to be informal and characterized by activity methods, whereas high school and college instruction is more likely to be highly formalized and subject-matter-centered and is less likely to make use of activity methods.

A study by the present author and Gladys May Patton (1958) supplies some clues to the greater willingness of elementary teachers to use learner-centered approaches. When both high school and elementary teachers completed a questionnaire of attitudes toward educational practices and child behavior, high school teachers were found to have attitudes that are more characteristically traditional and teacher-centered. The items that discriminated most sharply between the two groups of teachers are listed in Table 12-2.

If elementary teachers are more inclined to like children, it follows that they will also be more likely to develop educational programs that are attuned to the needs of children. In defense of secondary schools, it should be noted that the instruction in the elementary schools, where children spend the entire school day or most of it with one teacher, is more conducive to the kind of flexibility that the activity program requires. Another difficulty is that the subject matter of the secondary schools is more abstract: it is relatively easy to translate the fundamentals of arithmetic into projects growing out of the interests of children; it is relatively more difficult to do the same with history or geometry.

Even when school systems make deliberate attempts to introduce activity methods, they do not always succeed in carrying out their intentions, perhaps because teachers and administrators are not completely convinced of the desir-

Educational Psychology in the Classroom

TABLE 12-2. Statements about Educational Practices and Child Behavior, Together with Responses Which Tend to Be More Characteristic of Elementary Teachers Than of High School Teachers (Lindgren and Patton, 1958)

Statement
1. How a student feels about what he learns is as important as what he learns. (Agree)
2. The classroom experiences that are the most helpful to boys and girls are the ones wherein they can express themselves creatively. (Agree)
3. It is more important for students to learn to work together cooperatively than it is for them to learn how to compete. (Agree)
4. Some pupils are just naturally stubborn. (Disagree)
5. It is better for a girl to be shy and timid than "boy crazy." (Disagree)
6. The first signs of delinquency in a pupil should be received by tightening of discipline and more restrictions. (Disagree)
7. A teacher should lower grades for misconduct in class. (Disagree)
8. A great deal of problem behavior results from fear and guilt. (Agree)
9. Most pupils need some of the natural meanness taken out of them. (Disagree)

ability of the newer methods, or perhaps because it is difficult for teachers to make radical changes in their teaching methods. When the New York City schools made a large-scale attempt to introduce activity methods into some elementary schools just before World War II, observers found that the classroom behavior that resulted was in many respects similar to that occurring under the more conventional and traditional pattern. For example, children in activity classes were engaged in passively following (watching or listening) the activities of teachers or other students in an average of 72 per cent of the classroom periods observed. The corresponding figure for teacher-directed classes was only slightly higher—78 per cent. Evidently, the attempts of the teachers to use activity methods did result in less "passive participation" on the part of the students, but the difference was not as great as might be expected. As the observers reported, there was a good deal of similarity in the extent to which certain varieties of pupil behavior appeared in both kinds of classes (Thorndike et al., 1941).

The "Eight-Year Study." Although, as we have indicated, secondary teachers are inclined to resist changes in curriculum and methodology, some attempts to introduce new methods have met with striking success. Some of these experimental programs were undertaken as part of the Eight-Year Study, conducted under the auspices of the Progressive Education Association. During the 1930s, arrangements were made to "exempt" some of the students from thirty high schools from the more or less rigid pattern of preparatory

courses prescribed by leading colleges and universities. These thirty high schools then proceeded to develop their own curricula, attempting to provide and to emphasize experiences that would help students develop such characteristics as social sensitivity, critical thinking, and better personal and social adjustment.

The success of the experimental schools was measured by evaluating and appraising the records of 1475 of their graduates who went on to college. Each of the 1475 students was carefully matched, on the basis of college attended, sex, race, age, aptitude-test scores, home and community background, interest, and probable future, with a student from a traditional high school. These 1475 pairs were then studied carefully and intensively during their college career. Comparison of the two groups of students brought out the following advantages in favor of the graduates of experimental schools:

1. The overall average of their grades was slightly higher.
2. They made higher grades in every subject except foreign languages.
3. They received slightly more academic honors each year.

These findings are in agreement with the results of other studies of the academic success of students who have participated in activity programs: they do at least as well as, or slightly better than, students taking conventional programs. These results would therefore seem to meet the often-heard criticism that the newer types of educational programs are academically inferior to traditional ones.

However, the *chief* arguments in favor of revising the curriculum are not concerned with the development of an academically superior product. Actually, academic competence as measured by tests and grades is less important than the attainment of such broader objectives as the ability to think for oneself, the development of wide interests, and the development of an acceptable framework of values. Hence a more vital question from the standpoint of the experimenters was: what account did the graduates of the thirty experimental schools give of themselves in the *nonacademic* areas of college life?

Here are some of the findings:

1. They were more often judged by those who knew them to possess a high degree of intellectual curiosity.
2. They were more often judged to be precise, systematic, and objective in their thinking.
3. They were more often judged to have clear or well-formulated ideas regarding the meaning of education.
4. They were more resourceful in meeting new situations.

Educational Psychology in the Classroom

5. Although they had about the same problems of adjustment as the graduates from conventional schools, they approached the solutions of these problems with greater effectiveness.

6. They participated in the arts more frequently and enjoyed more appreciative experiences.

7. They were somewhat better oriented with regard to the choice of an occupation.

8. They demonstrated a more active concern for what was going on in the world (Aiken, 1942).

Although the differences between the two kinds of students were not large, they tended to be consistently in favor of the graduates of the experimental schools. Furthermore, the differences that favored the students from the *most* experimental schools (those of the thirty schools that made the greatest departures from the conventional curricula) were even more pronounced.

A follow-up, twenty years later, of a group of the participants in the Eight-Year Study showed that their superior performance continued after college. This group consisted of students who had graduated from the University High School of Ohio State University, one of the more experimental schools. Although only one fourth of the graduates had IQs equal to those of a specially selected group of one thousand "geniuses" studied by Lewis Madison Terman and Melita H. Oden (1947), the Eight-Year Study group performed equally well as the "geniuses" and were as successful. In fact, a higher proportion of them graduated from college and took graduate degrees than did the geniuses. Their post-college income was higher than that of the average college graduate and compared favorably with that of Princeton alumni. Over 80 per cent of the men and 88 per cent of the women participated in community affairs. Only 5 per cent believed that their high school had understressed intellectual content, and between 10 and 15 per cent actually believed it had been overstressed (Willis, 1961). If the experiences of the other graduates of the experimental high school programs were consistent with those of this group, it would appear that the Eight-Year Study was an outstanding success.

Prospects for Learner-Centered Methods. The situation in education today may be summarized somewhat as follows. Starting with the turn of the century, philosophers such as John Dewey and his followers criticized the curriculum, the methods, and the objectives of traditional education and suggested a number of reforms. Subsequent research has attested, in general, to the validity both of their criticisms and of their suggested reforms. We now know what kinds of reforms we must undertake in order to make the schools more

effective laboratories for learning. However, the progress in carrying out these reforms has come slowly, particularly in the secondary schools and colleges. The data being amassed by psychologists and other educational researchers are very convincing, but whether reforms succeed or fail or whether they will even be attempted depends on the attitude of the teaching profession and the general public, rather than on the logic of arguments. Indeed, follow-up studies of educational practices in schools that have made use of experimental curricula and methods show that there is a strong tendency for teachers to slip back into more traditional methods, once the enthusiasm for the new approach has died down (Redefer, 1950). Perhaps this finding is in itself an argument for a program of continual experimentation.

Whether experimental programs are instituted or reforms undertaken depends, in the final analysis, on the climate of public opinion. Basic educational policy rests, as it should, with the citizens of the community, and unless they are favorably disposed to innovation, little progress will take place. As a matter of fact, it is quite likely that much of the change that has taken place in schools since the beginning of the century has been brought about through the intervention of parents. One major difference between European schools and American schools is the access that American parents have to both the governing boards of the schools and the teachers. This access enables parents to exert considerable pressure on the curriculum and on the degree of learner-centeredness in the classroom. In recent years, however, particularly since the appearance of the first Sputnik, there has been a growing dissatisfaction with the schools, with a consequent demand by many parents for an abandonment of democratic procedures and a return to more traditional modes of education.

The ability of the public to exert control over educational policy and, to some extent over methodology, raises the question of whether the teaching profession is doing as much as it can to educate the citizens of the community as to the need for progress and experimentation. We have tried to show in this chapter how experimental programs produce superior results, but a public that is favorably disposed to experimentation and novelty in technology and the natural sciences is not necessarily in favor of experimentation and the application of scientific methods to classroom problems. And before teachers set about convincing the public that there is a need for reform, they themselves must be convinced that reform is necessary.

Another problem results from tendencies of teachers to be rather rigid, inflexible, and unrealistic in their perceptions of what can and cannot be done in the classroom. Some research conducted by William C. Morse (1961, 1962) and by Dunn and others (1964) shows that teachers believe that it is impossible to achieve both learning goals and mental-health goals and at the same

time give due attention to the group processes within the classroom. They also believe that it is impossible to develop good intergroup relations in the classroom and also at the same time give adequate attention both to the mental health of individual students and to learning. Students in their classes, however, do not see these three goals as mutually incompatible, as teachers do. Students report that progress toward any one of these goals tends to be accompanied by progress toward the others; in other words, where there is good achievement in classroom learning, there also tends to be adequate attention given both to mental-health needs of individual students and to group processes. Students' perceptions of what makes for sound educational practices are thus consistent with those of educational psychologists, but teachers seem to think that an emphasis on one of these goals makes it impossible to achieve the others. In fact, this belief is in line with the objections often expressed by teachers who are resisting the introduction of new or experimental methods: "Yes, I could give more attention to the mental health needs of children, but their reading would suffer," or, "It would be nice to have a more relaxed group atmosphere in the classroom, but you can't get as much work done, and besides, if I start working with the group, individual students will lose out." What Morse's research shows is that such arguments are unfounded and probably serve as excuses for not changing methods that teachers have grown accustomed to using.

The question of teacher morale is, however, an important one and should not be treated lightly. Moves to bring in new or experimental methods must be discussed at length with teachers before they are actually introduced. Precipitous decisions on the part of administrators inevitably arouse anxieties, feelings of inadequacy, and resistance. There are many teachers who achieve fairly good results within the setting of the traditional classroom. We would be hesitant about disturbing anyone who is doing an adequate job of teaching, even though we might feel he would be even more effective if he adopted the aims and methods of the new education and even though we are quite sure that many other, less able teachers are using traditional methods as a support or mask for their inadequacies.

The sentiments expressed by Lindley J. Stiles (1950), in summarizing a review of patterns of instruction, are well worth keeping in mind as we ponder the problem of how much change to introduce into the classroom:

A careful review of the research does not reveal evidence that there is any best pattern of instruction for every teacher in every situation. The consistency with which the project and laboratory methods have been shown superior to the recitation method and the encouraging results obtained through the use of teacher-pupil planning suggest that a method which provides for adaptation to individual

differences, encourages student initiative, and stimulates individual and group responsibility and cooperation in a social climate which is characteristically democratic, is likely to be more effective than a method which does not. While it is true that no method alone insures good teaching, certain methods permit more flexibility, and are more adaptable to the purposes of instruction in a democratic school system.

SUMMARY

Traditional forms of education fall somewhat short of meeting the psychological needs of students because they more or less deliberately frustrate students' attempts to socialize and to seek outlets for self-expression. On the other hand, traditionally oriented schools do make positive contributions to the psychological development of students by providing a stable, predictable environment in which to work and by bringing students into contact with the adult world outside the home. Newer methods of education attempt to meet a broader range of students' needs by providing learning situations that emphasize teacher-pupil planning rather than teacher domination; the use of many books instead of one main textbook; call for planning, working, and sharing together rather than merely reading and recitation; and stress the similarities among peoples rather than their differences.

Audiovisual techniques aid learning because they provide new dimensions for the communication of ideas. Educational television may also add a new dimension to classroom learning, although research so far fails to demonstrate its superiority over conventional methods. "Language labs" used with foreign-language instruction also seem to be a good idea, although their effectiveness has not yet been thoroughly evaluated. The integrated or core curriculum has had a somewhat wider acceptance than other educational innovations; it is often combined with team teaching. The chief value of some of the newer methods lies in the fact that the student becomes more deeply involved in the learning process. Whereas more traditional methods treat the student as a passive recipient of learning, the newer methods stress his activity. Learning is perceived as an active process that cannot succeed unless the student becomes actively involved.

Research findings on the effectiveness of learner-centered approaches to education indicate generally that students taught by the newer methods are at least as competent in skills and information as are students taught by more traditional methods. However, students taught by the newer methods also make greater gains in the ability to think for themselves, as well as in other "nonacademic" competencies. The increments reported as favoring the newer

methods are usually not very large, probably because it takes more than a brief exposure to new methods to bring about any marked changes in learner behavior.

Whether or not students attain the goals of education will depend on their motivation, and their motivation will depend on the kinds of attitudes they possess or develop. Inasmuch as attitudes are strongly influenced by the norms of the group in which one holds membership, it would appear that the attainment of educational objectives will, in the final analysis, depend on the success the teacher has in working with the classroom group, as well as with individual students. Furthermore, the aims and objectives of education that are seen today as basic to the acquisition of skills and information are to a large extent a function of group behavior.

Perhaps the most basic group method is that of the discussion. Group discussion methods not only have stimulating effects on cognitive processes, but also help improve communication, group morale, and cohesiveness. Teachers can be more effective in group discussions, if they play less-directive roles and help group members interact with one another. Topics for group discussion can be based on the problems that students encounter in everyday life or can be drawn from some common experience, such as a field trip they have taken or a film they have seen.

One of the shortcomings of large-group discussions is that some students tend to monopolize and dominate and others participate only occasionally or not at all. Participation can be spread by the use of small-group discussions or "buzz sessions." Buzz sessions can also be helpful in opening up a new subject or in getting the classroom group involved in a topic that they had not previously considered to be important.

Committee work is also a useful way of spreading participation. It is a way of giving students opportunities to learn how to work cooperatively and to think for themselves.

Group methods find their greatest use in the newer types of courses and curricula: activity programs, project methods, life-adjustment education, human-relations training, and intergroup education. The latter two types of programs are particularly concerned with helping students develop a better understanding of themselves and others. The success of such courses depends on the ability of the teacher to get students to talk about themselves and their feelings.

The number of experimental programs using group methods is increasing. Although it is yet too early to make any definitive appraisal of their success, the published research appears to indicate that they are useful in developing better group feeling among the members of classroom groups.

The teaching profession has been slow to adopt learner-centered methods of education, partly because the newer methods call for the development of different techniques, as well as an understanding of the needs of students. Furthermore, the climate of opinion in many communities is not friendly to the introduction of newer methods. The greater freedom of action and decision permitted students in modern classrooms has led some segments of the public to believe that they are permitted to "run wild." Another problem is the difficulty of developing activity programs that are really different from conventional ones. So far the greatest changes in the direction of learner-centered education have come in the elementary schools, where teachers tend to be more sympathetically disposed toward children and their problems and where the teaching situation more readily permits the flexibility required for activity methods. Because of such difficulties, learner-centered methods of education are not as widespread as is popularly believed.

One outstanding attempt to experiment with the curriculum of the secondary school was the Eight-Year Study, conducted during the middle and late 1930s. The graduates of thirty high schools that had developed experimental educational programs were compared with a matched group of graduates from conventional high schools. The graduates of the experimental schools not only made scholastic records that were slightly superior, but they also ranked consistently higher in work-oriented attitudes, appreciation of cultural opportunities, and other nonacademic strengths. A follow-up of graduates from one experimental high school twenty years later showed that they were able to sustain their superior performance after leaving college.

Although the evidence in favor of experimental, learner-centered methods continues to mount, there is widespread resistance to them on the part both of the lay public and of teachers. The question is raised as to whether teachers are doing as much as they can to educate the citizens of the community, who, in the final analysis, control the educational policies of the schools. Teachers also have difficulties in accepting the desirability of reform, because they feel that either a mental-hygiene or a group-processes approach would detract from the attainment of achievement-oriented goals. There is, furthermore, the problem of whether one should try to change the practices of the many fairly effective teachers who employ traditional methods.

SUGGESTED PROBLEMS

1. Joe is an unhappy, frightened fourth-grader. His father is an alcoholic who works only occasionally and who beats his son and his wife whenever he engages in one of his drinking bouts. Joe's mother works all day long.

Educational Psychology in the Classroom

Joe has just transferred to the George Washington Grammar School, which is a traditional, formal school in the older part of the small city in which he lives. Envision for yourself a formal educational situation and indicate some of the ways in which going to such a school might be both helpful and rewarding for Joe.

2. Suppose that the George Washington Grammar School had an educational program that was learner-centered, instead of traditional. In what additional ways could Joe be helped? In other words, how could some of his needs be met better in a learner-centered school than in a traditional teacher-centered school?

3. Have you ever attended a movie or watched a television program that caused you to change your mind about something you had always believed? If so, perhaps you can describe how the process took place. Or have you ever had your mind changed as a result of participating in a group discussion? Perhaps you can recall some of the factors that led to the change.

4. Compare two learning experiences you have had, one where you sat passively and "absorbed" what was taught, and another when you "learned by doing." Which was the more personally satisfying? Which was the more successful?

5. One of the findings of the Eight-Year Study was that college success is in no way dependent on the pattern of courses taken in high school. In spite of this finding, the patterns of high school courses required for college entrance remain much the same as they were thirty years ago, before the Eight-Year Study was conducted. How do you account for the fact that they have not changed?

6. The available research comparing lecturing with discussion methods indicates that students learn approximately the same amount of subject matter with each method, but that they prefer the discussion and find it more interesting. Yet far more teachers, particularly in colleges and universities, prefer the lecture method. What are the probable reasons for their unwillingness to change?

SUGGESTED READINGS

- Aiken, W. M., *The story of the Eight-Year Study*. New York: Harper, 1942.
- Bany, M. A., and Johnson, L. V., *Classroom group behavior: group dynamics in action*. New York: Macmillan, 1964. Describes the psychological forces at work in classroom groups, as well as practical ways in which teachers can influence and change group behavior.

- Bingham, A. I., *Improving children's facility in problem solving*. New York: Bureau of Publications, Teachers College, Columbia University, 1958. Methods and techniques appropriate to the elementary school.
- Cook, L., and Cook, E., *Intergroup education*. New York: McGraw-Hill, 1954. Using group methods as a way of reducing prejudice.
- Cook, L., and Cook, E., *School problems in human relations*. New York: McGraw-Hill, 1957. A collection of case studies involving intergroup education in the classroom.
- Dewey, J., *Democracy and education*. New York: Macmillan, 1916.
- Grambs, J., *Group processes in intergroup education*. New York: National Conference of Christians and Jews, 1953. An excellent 25-cent pamphlet describing group techniques.
- Henry, N. B., ed., *The dynamics of instructional groups: socio-psychological aspects of teaching and learning*, 59th Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1960.
- Horowitz, M. M., The teacher utilizes group forces, in *Learning and the teacher*, 1959 Yearbook of the Association for Supervision and Curriculum Development. Washington: National Education Assn., 1959.
- Lindberg, L., *The democratic classroom: a guide for teachers*. New York: Bureau of Publications, Teachers College, Columbia University, 1954. Emphasizes the need for teachers to experiment with ways of using democratic methods in helping children solve problems.
- Moustakas, C. E., *The teacher and the child: personal interaction in the classroom*. New York: McGraw-Hill, 1956. Excerpts from the tape recordings of conversations between teachers and students, showing attempts at understanding behavior and motivation. Covers situations from kindergarten through high school.
- Pratt, C., *I learn from children*. New York: Simon and Schuster, 1948. The personal experiences of a teacher who broke with tradition and attempted to develop classroom experiences that met the psychological needs of children.
- Ripple, R. E., ed., *Readings in learning and human abilities*. New York: Harper and Row, 1964. See Section 7, "Recent innovations in teaching-learning."
- Taba, H., *With perspective on human relations*. Washington: American Council on Education, 1955. A study of peer-group dynamics in an eighth grade.
- Thelen, H. A., *Dynamics of groups at work*. Chicago: University of Chicago Press, 1954. A handbook dealing with the application of principles of group processes to a variety of tasks. See particularly Chapter 2, "Educating children through need-meeting activity." Available as a paperback Phoenix book.
- Willis, M., *The guinea pigs after 20 years*. Columbus: Ohio State University Press, 1961. A follow-up study of a group of students who graduated from one of the "experimental" high schools in the Progressive Education Association's Eight-Year Study. (Mentioned briefly in this chapter.)

13 The Evaluation of Learning



George Zimbel from Monkmeier

The Teacher's Role in Evaluation. The chief objective of the school, as we have observed previously, is the promotion of learning. All activities of the school should therefore be related directly or indirectly to this purpose, and the extent to which the school and its personnel have succeeded or failed is reflected in the amount and kind of learning that takes place. The learning that occurs should have some kind of effect on the behavior or performance of the learner. In other words, the student who has been through a successful learning experience presumably behaves differently, in the sense that he is more effective and more competent, than the student who has not been through such an experience. The student who has successfully completed a unit in business correspondence no longer begins each paragraph with "I"; the student who has successfully completed a year of biology views nature and its processes in a different way; at the end of a successful first year of school, the child who was a nonreader a year ago is now able to read. Because successful learning experiences bring about such changes in behavior or performance, we can evaluate the learning that has taken place (and, incidentally, the success of our own efforts to teach) by identifying, observing, or measuring certain changes in behavior that are indicative of growth and development. The whole process of identifying, observing, measuring, and analyzing various aspects of learners' performance is what is called "evaluation." Indeed, *anything* that the teacher does in order to determine the extent to which the teaching-learning process is succeeding comes under the heading of evaluation.

Evaluation is the result of the teacher's concern with the goals of education. In his role as an evaluator the teacher asks himself such questions as the following. "Are students making any progress in the direction of the goals appropriate to this learning situation? What evidence indicates whether or not they are progressing? How much progress, if any, are they making?"

To what extent can their success (or failure) be attributed to the experiences that they have had in the classroom?"

The teacher's role as an evaluator of learning may appear to be somewhat at odds with his roles as a stimulator and promoter of learning. Many a teacher has worked with a class for a number of weeks, trying to build group morale, cohesiveness, and group feeling, only to see the class freeze up and suddenly become uncommunicative when he announces an examination. At such times he might wish that final marks in his course were limited to "pass-fail," thus relieving him of the responsibility of grading the performance of individual group members. These problems are aggravated when the teacher has become immersed in the group process and has come to think of himself as a fully functioning member of the classroom group.

It may help to resolve some of the confusion if we think of teachers as having two basic roles: that of the participant and that of the observer. In his role as the participant, he plans educational programs, develops methods and uses materials in order to carry out the programs, and participates in the social interaction of the classroom, while performing his specialized functions as a teacher. In his role as an observer, he is more detached: he analyzes students' backgrounds, notes how students are reacting to his methods and materials, and makes certain conclusions regarding the progress made by individual students, as well as by the class in general. There is a tendency for teachers to subordinate one of these roles to the other. Some teachers become immersed in the daily give-and-take of the teaching-learning process, whereas others play detached, judgmental roles, never fully committing themselves to active participation. In the final chapter we shall discuss at greater length the various roles that teachers play, but for the present let us keep in mind that the teacher is responsible to the community, the administration, his profession, and to himself, as well as to the students in his class. The community, the administrators, and very likely the teacher himself will want to have some indication as to whether the educational program is succeeding with students. A teacher may not enjoy making the kinds of observations and judgments that will enable others to judge the progress of his students, as well as his own work, but he should recognize their right to make such judgments. Furthermore, if he does not supply them with the data they want, they will find ways of collecting their own data. The teacher has little to gain and much to lose by refusing to participate in the evaluative process; it is only by participating that he can have anything to say about the bases on which teaching-learning is to be judged and the kinds of judgments that are to be made.

It is not easy to coordinate the warm and human roles of the participant

in teaching-learning with those of the cool, detached, and objective roles of the observer, but this is a problem that every teacher must face and resolve. It would seem that he can preserve the greatest amount of professional freedom if he resolves the issues himself, rather than have them resolved by external authorities. If he is to create some kind of a balance between participant and observer roles, he should be as familiar with evaluational techniques as he is with teaching techniques. If he does an inadequate job of evaluation, he not only has inferior data to communicate to authorities and to his students, but he may develop misconceptions about the effect that his teaching is having on students. The best justification for evaluation is our desire to improve teaching and learning, and if we want this evaluation to have any real meaning, we should do it as objectively and as carefully for ourselves and our students as we otherwise do it on behalf of others.

Steps in Evaluation. All education takes place with respect to goals. Usually the goals are implicit: we include courses in mathematics in the high school curriculum because we believe that high school graduates should have some understanding of and skill in the use of mathematics. Understanding and skill in mathematics thus are implicit goals—they are *implied* by our inclusion of mathematics courses in the curriculum.

One of the first steps the teacher-evaluator should take is that of making the goals explicit—determining what his goals actually are. It is important that goals be thought of in terms of the pupil behavior that should occur as a result of his having gone through the educational experience under consideration. If the teacher thinks of educational goals in terms of his *own* behavior, he may find himself unable to do any objective evaluation. To take a simple example, it makes a great deal of difference whether the goal of a course unit is stated as “As a result of this unit, pupils should have a better understanding and appreciation of Inca civilization,” or whether it is stated as “My objective in this course is to teach the facts about the Inca civilization that children of this age level ought to know.”

The first kind of statement requires the teacher to look for evidence indicating the extent to which students have or have not gained an understanding and appreciation of Inca civilization. This is not easy; it is a difficult problem that has no final answers or solutions. Hence it is understandable that the teacher might be tempted to avoid some of the issues and challenges it poses. The second kind of statement does not present such a problem, for the teacher can say: “I achieved the objectives of the curriculum because I taught the facts about the Inca civilization.” In the first instance, the criterion for success lies in the *changes* that have taken place in the behavior of the students; in the second instance, the criterion depends on the teacher’s re-

action to his own behavior—if he approves of what he has done, he has succeeded, regardless of whether or not his students have demonstrated any intellectual growth. The second kind of objective is more characteristic of traditional, teacher-centered education, because this approach assumes that the teacher is right: if anyone fails, it is the student who fails—because he did not apply himself or had insufficient background. The teacher who states his goals in terms of student behavior, however, expresses a more scientific attitude, for he is continually putting the entire teaching-learning situation to the test: if the goals were not attained, he must examine the adequacy of the teaching, the background of the students, or the validity of the goals themselves. The teacher who uses behaviorally oriented goals is continually looking for evidence indicating whether or not his objectives have been attained; the traditional teacher assumes that his objectives were attained if he taught the course to his own satisfaction.

There are some fairly well-defined steps involved in setting up an evaluation program based on the scientific method, although there are several acceptable ways of stating or describing them. The Bureau of Educational Research of the California State Department of Education (1952) has outlined the basic steps as follows:

1. Formulating and classifying the objectives of the school's curriculum.
 2. Defining the objectives or goals of education in terms of behavior.
- Staff members will find it helpful to ask themselves two questions. (a) What are some of the important things students will do when they have achieved growth toward this objective? (b) How does their behavior differ from that of others who have not achieved such growth?
3. Identifying situations in which students can be expected to display progress toward the objectives.
 4. Selecting or constructing instruments (usually tests) or methods by which data for appraisal purposes can be secured.

Measurement, Evaluation, and the Use of Tests. The terms "evaluation" and "measurement" represent concepts that are sometimes confused or misused by educational workers. Some teachers apparently feel that they are "evaluating" when they give tests to students and record the scores without attempting to interpret them or to relate them to what is going on in the classroom or to any other aspect of student behavior. Others evidently feel that they are doing an adequate job of evaluation when they make judgments (in the form of grades) regarding student progress which are unsupported by any kind of objective data.

In order for a program of evaluation to be effective, it should be based,



Audio-Visual Services, Alameda County Schools

Evaluation is an important part of the teaching-learning process. Even the taking of tests can stimulate a great deal of learning, provided that the classroom atmosphere is not heavily charged with anxiety.

at least in part, on measurement of some sort—that is, it should involve the gathering of data that are descriptive and that can be related to some appropriate standard or norm. However, evaluation consists of much more than the collection and recording of data. As Robert L. Thorndike and Elizabeth Hagen (1961) point out, evaluation is more inclusive than measurement. Evaluation includes informal and intuitive judgments about pupil progress, as well as the act of “valuing”—saying what kind of behavior is desirable and good. However, “good measurement techniques provide the solid foundation for sound evaluation, whether of a single pupil or of a total curriculum.”

Although most educators would agree that evaluation should always be concerned with results, and that these results should be considered in the

light of the goals or objectives of the curriculum, there is no general agreement on the best way to conduct a program of evaluation. Some experts in the field believe that evaluation should depend largely on the results of objective, standardized tests—that is, tests that have been carefully prepared and refined statistically in order to make them more precise and valid. Others object to depending on tests of this sort, pointing out that objective tests do not tell you how an individual thinks, because they may measure only isolated bits of knowledge and information and may thus bypass the major objectives of the curriculum. Some educators prefer tests of the essay variety, because they show how students can deal with a problem and develop it to its logical conclusions. On the other hand, those who favor the standardized test feel that the essay examination lacks sufficient objectivity. Still others object to *any* approach to evaluation that depends solely on testing, because they feel that progress toward the major objectives of the curriculum really cannot be measured adequately, at least by the kinds of tests commonly used in the classroom. Another criticism of evaluation that is based solely on the results of tests is that it is concerned only with “paper-and-pencil behavior”—behavior that may bear no relationship to the everyday life of the pupil. It is possible, for instance, for a student to get a very good score on a geography test and still not be able to make sense out of an ordinary city map. Or he might get good grades in English tests and still not be able to write an adequate letter of application for a job. These educators therefore argue in favor of an additional and broader base of evaluation—one that is based on the teacher’s observations and impressions of the behavior of individual students, as well as that of entire classes.

Although these data cannot be easily quantified and can become more or less biased by the teacher’s attitudes and feelings, they can nevertheless serve as sources of valuable information that cannot be obtained in any other way, information that most teachers actually find essential. For example, a teacher can learn to sense the degree of interest, apathy, receptivity, or resistance that his class expresses when he presents new material or works with them on a learning task. Most experienced teachers use this kind of appraisal as a basis for deciding whether they should modify their approach, capitalize on a sudden surge of interest, make a bid for closer attention, or review briefly—whatever their analysis of the situation suggests. Over a period of time, these brief “clinical appraisals” begin to shape into a general impression of a student or a class, and the teacher is able to make evaluative statements like the following: “A rewarding group to work with, but so eager to learn that sometimes they fall over themselves”; “I feel we have got nowhere this term

and I must find out what is blocking our progress"; or "The general atmosphere of the class is cautious and even resistive, but there are three or four students who are eager to learn and who help get things moving."

Much of what we call "teaching ability" consists of the ability to make valid and objective judgments about the progress made by learners. Learning to teach means, in part, learning what to notice and what to ignore in the way of behavior, and what interpretations and conclusions to draw. It is difficult, however, to tell potential teachers in so many words exactly how such appraisal and evaluation should be accomplished, partly because it is impossible to predict what kinds of potentially useful data will be encountered in a given class, and partly because the individual style of each teacher will determine what data he will consider are important and how he will use them.

However, an example of how teachers' observations could be employed as part of an overall program of evaluation might be helpful at this point, if only to suggest the kinds of things that teachers look for. Let us take an objective that is difficult to measure, yet is basic to progress in learning—the objective of student interest. A teacher whose class is studying Peru might state this objective as follows: "The student becomes interested in the history and culture of Peru." Success in attaining this objective may be reflected by the extent to which students ask relevant questions, the eagerness with which they participate in discussion, the frequency with which they linger after class to ask questions and continue discussion, and the like. Willingness to carry out independent activity is another indication of interest. For example, a boy might become fascinated by the Inca civilization and hence asks the teacher what books he might read. The fact that he refers to the books in subsequent discussion is an indication that he has in fact read them. Or perhaps he makes a collection of stamps from Peru that show the influence of Inca art and culture. These are but a few examples of the kinds of behavior that would reveal the extent to which students have developed an interest in Peru.

Although it is difficult and perhaps impossible to apply any precise standard of measurement to the kind of student behavior we have described, it would be foolish not to include it as evidence of the attainment of educational objectives, particularly those objectives that cannot be measured by conventional paper-and-pencil methods and that may, like the development of student interest, be prerequisite to the success of the entire educational program.

The points we have been making about the importance of teacher observation and appraisal have been neatly summarized by I. James Quillen and

Educational Psychology in the Classroom

Lavonne A. Hanna (1948) in a list of six characteristics of a fully functioning evaluation program:

1. Evaluation includes all the means of collecting evidence on student behavior.

2. Evaluation is more concerned with the growth which the student has made than with his [academic] status in the group or the [academic] status of the group, the school or the program in relation to some national norm.

3. Evaluation is continuous: it is an integral part of all teaching and learning.

4. Evaluation is descriptive as well as quantitative.

5. Evaluation is concerned with the total personality of the student and with gathering evidence on all aspects of personality development.

6. Evaluation is a cooperative process involving students, teachers, and parents.¹

Feedback in Evaluation. Before we go on to discuss the specific techniques used in educational measurement, it may be useful to consider the function of "feedback" in the evaluational process. This may help those who are unsure about the way in which observer-evaluator roles are related to participant-teacher behavior.

The term "feedback" is one that psychologists have borrowed from the field of electronics. It refers to a process whereby data are "fed back" into a system (either a human organism or a group can be considered a "system") in order to modify and correct its behavior. A thermostat serves this type of function for a central-heating system. When the temperature falls below a certain level, this information is fed into the system, which then turns on the furnace. To transfer this concept to the learning process, we can say that if data regarding a learner's performance on a task can be fed back to him, he is in a position to guide and direct his efforts more effectively and efficiently. This principle is also used in those teaching machines in which learners find out immediately whether their answers are right or wrong. A considerable number of research studies show that learners tend to function more successfully if they receive reports as to their success or lack of it. This was brought out in the study by Ellis Batten Page (1958) that we cited in Chapter 8 in which students who received teachers' comments on their quiz papers showed more improvement on the next quiz than did students

¹ From *Education for Social Competence* by Quillen and Hanna. Copyright, 1948, by Scott, Foresman and Company, used with permission.

whose papers were only graded. Another study showed that students retained (remembered) material covered in quizzes best when they received feedback in terms of the instructor's discussing the correct answers with them. This method was more effective than having students look up the answers in the book or having them check their replies against a list of answers written on the blackboard. All three of these methods were of course better than no feedback at all (Sassenrath and Garverick, 1965).

There may be two other reasons why feedback aids learning: (1) it focuses the learner's attention on certain important aspects of the learning task and (2) it raises the learner's level of interest. Research is lacking on these two points, but they seem to follow logically from studies that have been conducted. One problem, as we noted in the chapters on the learning process, is that of maintaining a sufficient degree of normal anxiety. Learning proceeds best when the amount of tension or anxiety is at a moderate level, and feedback of data regarding learning progress should help maintain a moderate degree of tension. We have also mentioned the fact that teachers have to compete with many distracting stimuli in the world outside the classroom, and anything they can do to attract the attention and interest of students should facilitate success in classroom learning.

What works for students also seems to work for teachers. When sixth-grade teachers received reports of anonymous pupil evaluations of their behavior, they tended to change their methods in a learner-centered direction. This was borne out by subsequent anonymous evaluations by students (Gage, Runkel, and Chatterjee, 1960). Evidently, teachers' behavior, as well as that of students, can be modified by feedback.

Attitudes toward Evaluation. One of the difficulties that complicate educational evaluation stems from the attitudes that many laymen (especially parents) and teachers have toward measuring and judging academic performance. Because of these attitudes, the whole task of evaluation becomes charged with the utmost anxiety. Parents whose child receives a lower mark or test score than they expected often act as though the evaluation of their child's performance is a reflection on their ability to rear an intellectually competent child. When confronted with this attitude, the teacher reacts defensively by saying that if the child had tried harder, he would have done better. After all, it was not the teacher's fault that the child did not try hard enough. This puts the responsibility back on the parents, who then suggest that if the teaching had been better, the child would have tried harder. And so it goes.



*"Dad—I'll thank you to keep my
old report cards out of this conversation."*

Mirachi, Wall Street Journal. (Reproduced by permission.)

Under pressure of anxiety about a child's academic performance, a parent may at times have difficulty in maintaining a balanced and objective point of view.

Without trying to oversimplify what is admittedly a most complex problem, it may be suggested that tense interchanges like these could be avoided if teachers and parents realized that test scores, marks, and other indices of academic performance are *relative* measures, which at best are only approximate. Both grades and the scores made on tests somehow become charged with some kind of magic power that reifies them, that gives them a certain finality, a certain aura that causes us to regard them as the end product in learning, if not as learning itself. What we keep forgetting is that test scores, as well as the grades that are based on them, are only one index to the amount of learning progress that has taken place. Although research does indicate that persons who get superior grades tend to have a better-than-average chance for success after graduation, the biographies of the great and near-great often mention academic failure. Teachers' evaluations are wrong often enough for us to be more tentative than we generally are in interpreting the results of the tests we give and the grades we assign.

What is needed is a little "enlightened skepticism" toward measurements. We should realize that educational measurements are not "yardsticks," as

measurements are in the physical world. A pound of flour remains a pound of flour under an infinite number of situations and conditions, but George, who scores "82" on his spelling paper and who is average for his third grade class, would score near the bottom of a group of fifth-graders in spelling, or at the top of a group of second-graders. He may rate "above average" in spelling if compared to a group of children who attend a one-room school in the mountains, but "below average" if compared to children in an upper-middle-class suburban school. George's score of "82" may be typical of the kind of work he does when he is interested and not overstimulated, but when he is bored or hyperactive he may score at "50" or "60." On a different kind of test, he may score "10," "30," or even "113." The point is that there is nothing as permanent or definitive about a test score as there is about the measurements that are made in the physical world. Educational results, like physical measurements, are always relative to other higher and lower results, but unlike physical measurements, there is no real "zero," although test scores sometimes come out as "zero." A "zero" on a test does not mean that no learning has taken place, but rather that the test is unable to measure whatever learning may have taken place. Physical increments come in fairly equal units, such as pounds and inches, but educational increments are never equal even though they look the same on paper. Sam scored "41" on the same test on which George scored "82." Does this mean that George spells twice as well as Sam? Or that George can spell twice as many words as Sam? It is most unlikely.

We also need to develop some sophistication about the meaning of scores. A score of 50 means one thing if there are 55 items in a test, but something else if there are 155 items. A score of 50 means one thing if the "middle student" in the class received a score of 25, and something else if the middle student received a score of 75. In other words, a student's score takes on meaning in terms of the possible range of scores and particularly in terms of the scores made by other students. The first step in developing sophistication about scores is that of keeping in mind that scores refer to individuals and their competencies on a certain test, rather than to arbitrary increments of subject matter.

In spite of the ambiguous qualities of educational measurements, they are very useful tools, and we could not do without them. We should be skeptical about their ability to reflect learning status or progress in any kind of exact way, but we should also be realistic enough to recognize that we must have some kind of data on which to base judgments about the success of the educational program or the progress of individual students.

TEACHER-MADE TESTS

Some of the data on which teachers' judgments are commonly based consist of scores made on tests or examinations. The emphasis placed on tests and examinations will vary with the age of the student, the subject, the objectives of the curriculum, and the educational philosophy of the teacher and the school, but they will figure to some extent in the evaluation program of almost every teacher. For the sake of our discussion we will divide tests into two categories: those devised by teachers—teacher-made tests—and those prepared by test publishers, commonly called "standardized tests."² Teacher-made tests are the quizzes and examinations that teachers construct and give at various times during the school year in order to stimulate learning through review and to determine status and progress in learning. There are a number of similarities between teacher-made and standardized tests, but we are postponing discussion of the latter to the next section, where they may be considered in terms of their special characteristics.

Oral Examinations. A century ago, most tests and examinations were conducted orally.³ The teacher (or a committee of school visitors) put questions to each student in turn and marked him on his ability to reproduce what had been taught him. This method relied very heavily on the student's ability to memorize material word for word and repeat it orally before his classmates and his teacher. The student who could learn essential facts and concepts but who was unable or unwilling to memorize details or who was unable to maintain his composure before a group was at a distinct disadvantage. However, one of the chief flaws in this method was its inefficiency. Because it took so much time to question an entire class, one student might get a chance to answer only one or two questions during the examining period. A student might have a fairly good grasp of the subject matter, but the one or two questions directed at him might fall within an area less familiar to him. Or he might have a rather poor grasp of the subject matter and be asked questions he knew rather well. In other words, the oral method did not permit a fair sampling of what students had learned.

² Teachers occasionally develop their own standardized tests by the same statistical methods used by test publishers. However, because most teachers do not have the training, the time, or the inclination for this task, most standardized tests used in the schools are tests supplied by publishers.

³ In many countries oral tests are still considered to be more valid and more significant than written tests, although it is common practice to give both kinds of tests.

Essay Examinations. The method which was proposed by Horace Mann, among others, to supplant this inefficient method of evaluation, was the written examination—what we now commonly call the “essay examination.” The written examination permits a much wider sampling of subject matter, and the student does not have the feeling of being under the scrutiny of his classmates and teacher while he searches for ideas and words to convey his knowledge. Writing gives him an opportunity to express himself in relative privacy. Furthermore, students can be given questions to be answered in the form of short essays, thus making it possible to test their ability to develop a subject logically.

Although written tests provide some distinct advantages over oral examinations, they have their shortcomings. The chief disadvantage lies in the difficulty in obtaining objectivity in scoring. The Educational Testing Service (1961), a nationwide, nonprofit organization concerned with preparing, administering, scoring, and interpreting educational tests, conducted a research study into the methods used in grading the compositions written in college English classes. A panel of fifty-three judges read three hundred essays written by freshmen at Cornell, Middlebury, and the University of Pennsylvania, and graded them on a scale ranging from 1 to 9. One third of the essays received grades that ranged the full scale from 1 to 9; 60 per cent received seven or eight out of the nine possible grades; and no essay received fewer than five different grades. In another study, seventy history teachers gave a paper in American history marks ranging from 43 to 90 (on a scale ranging from 0 to 100). The question naturally arose whether the same variability would occur in mathematics, which presumably lends itself to more precise and objective measurement than the humanities or the social sciences. After all, said the mathematics teachers, the answer to a problem in mathematics is either right or wrong. But the results obtained from a similar study with a geometry paper were most disillusioning: the grades ranged from 28 to 92 (Starch, 1927).

Another and more recent study was conducted among teachers scoring examinations in Lebanon. Nine teachers graded two packets of essay examinations in philosophy. As Figure 13-1 shows, the average grades they assigned to each packet showed wide variations. Teacher B was obviously an easy grader: he gave an average mark of 100 to the first packet and 87 to the second. However, Teacher D gave the first packet an average grade of 60 and the second packet a 73. Teacher H was quite consistent: he gave both packets an average grade of 69 (Valin, 1961).

Not only do grading standards vary from teacher to teacher, but a given teacher will vary from time to time. A teacher may, for instance, assign a

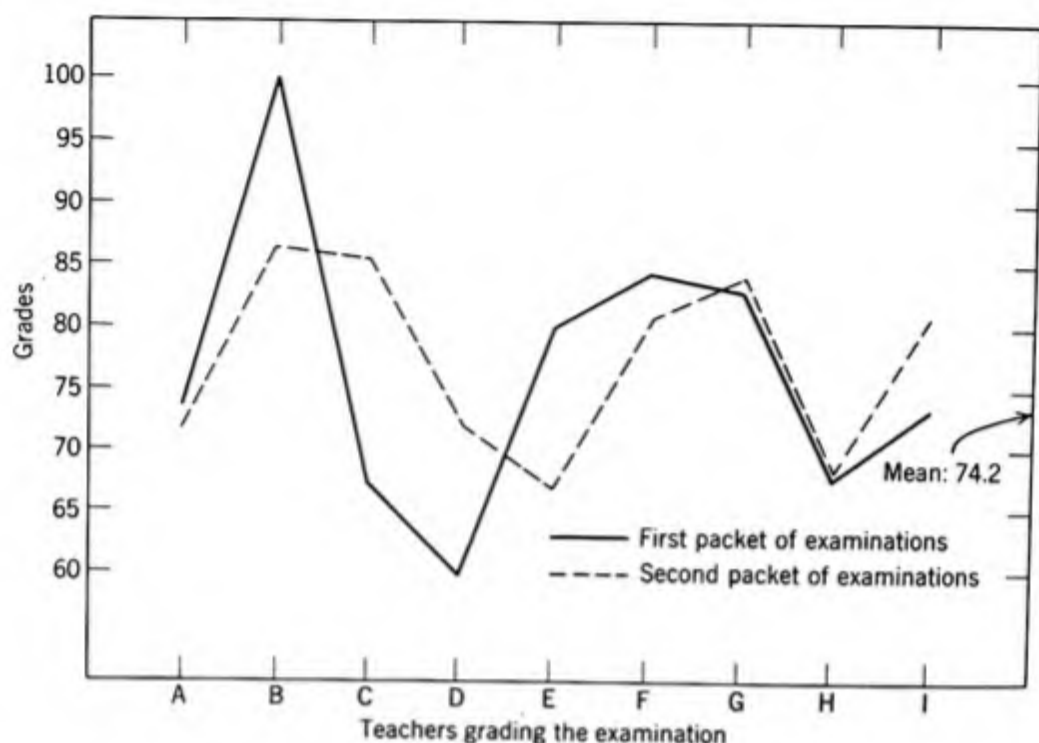


FIGURE 13-1. Variations among teachers grading two groups of essay tests in philosophy. Note (1) the extreme variations among graders and (2) the tendency of a grader to grade both groups in somewhat the same way. (Valin, 1961.)

paper one kind of mark if he grades it near the start of his work period and a different mark if he reads it after looking at examinations for four or five hours.

What these studies show is that a great deal of the variability of the marks that students receive on examinations is a reflection of the variability of persons doing the marking. In other words, four examinations graded A, B, C, and D by different teachers could conceivably be on about the same level of quality. Many a college student has received an A on an essay, has retyped it, and handed it in to another instructor the following semester, only to have the second teacher grade it a C or less! Most teachers are, unfortunately, unaware of the great variability in their marking standards. It is also difficult for a teacher to determine when he grades a paper in, say, history, how much he has been influenced by the student's ability to express himself in a clear and interesting way. He may think that he is grading the student's understanding of history, but he is actually grading his ability to express himself.

Some recent research shows that much intergrader variation can be reduced by the use of computers. But the question still remains as to whether

using essay tests adds anything to the teacher's ability to evaluate student performance. The Educational Testing Service (ETS) has been conducting extensive research in this field. College teachers of English have expressed great dissatisfaction with objective, IBM-type tests of English usage administered to college applicants, saying, in effect: "What we need to have is evidence that the applicant can *write*, not just guess the right answers on a multiple-choice test." In response to such requests, the College Board section of the ETS developed an experimental test consisting of five essays, two taking forty minutes each to write and three taking twenty minutes each. The tests were then read by five scorers, who worked closely together in order to avoid the kind of variations that we have observed in Figure 13-1. When the scores on the essays were compared with scores on an objective test of English usage, which students had also taken, the ETS researchers found that the scores on the two types of test correlated to a very high degree, almost to the point where one test could be substituted for the other. The study showed, among other things, that an objective, multiple-choice type of test could do a very respectable job of estimating or predicting students' ability to write clearly and competently and that there was no special advantage to using essay tests (Educational Testing Service, 1963).

There are many reasons for using essays and essay testing, other than for purposes of assigning grades. If the objective of an English course is that of preparing students to write effectively, such an objective can only be achieved if students write. In fact, the more they are encouraged to write, the better able they are to express themselves in writing. It is quite possible, too, that cognitive processes involved in answering essay questions are different from those used in answering objective-type questions. Any of these would serve as justifiable reasons for retaining essays as assigned work or as examinations. The important thing for teachers to keep in mind is the difficulty in maintaining objectivity and the consequent danger of misjudging student performance. The risk of misjudgment is possible with all types of evaluation, but is probably higher with essay tests.

Choice-Type or "Objective" Tests. One of the ways in which educators have tried to deal with the lack of objectivity in scoring examinations is that of devising test items that restrict the possible variability in the answers that may be given, thus simultaneously reducing the variability in scoring. Such tests are called "objective tests," in contrast to written tests or "essay tests." Robert L. Ebel (1951) suggested that essay-type items be called "supply-type items," because the student is required to *supply* the proper answer. Most types of objective-test items he would call "choice-type" items, because the

Educational Psychology in the Classroom

student is required to *make a choice* among the alternatives that are supplied as possible answers.

Although we shall occasionally follow the common procedure of referring to choice-type tests as "objective tests," the term "objective" is actually misleading to some extent, inasmuch as the "objectivity" of such tests refers entirely to their scoring—the degree to which different scorers will get the same results. William A. Brownell (1934) once made a list of subjective and objective factors that enter into the use of objective tests. Out of eleven factors, he could find only one that could really be termed objective:

Well, first of all . . . one *decides to give* a test. The decision is surely not based upon purely objective considerations. Second, one determines whether to *make* a test or to *buy* one. . . . Third, one makes up one's mind regarding the *kind* of test—whether it is to be of the traditional type, of the newer types, or a combination—judgment again. Fourth, one settles upon the *scope* of the test—judgment once more. Fifth, one selects the *items* to be included—little objectivity here. Sixth, one chooses the *form* to be employed—true-false, multiple choice, or what not—again little objectivity. Seventh, one *frames the items* as carefully as one can—and once more has only his judgment for guidance. Eighth, one prepares a *key* by listing the correct answers—a judgment which may not be acceptable to other teachers even of the same subject. Ninth, through opinion one defines the conditions of *administering* the test. Tenth, one *scores* the papers—at last objectivity. But, eleventh, one *assigns marks*—another increment of judgment, and a big one.

The most common examples of choice-type test items are those that involve two choices (such as true-false items) and those that involve a number of choices, usually four or five, termed "multiple-choice" items.

Examples of True-False Test Items

- T F 1. The chief mineral ingredient in the human skeleton is calcium.
T F 2. A person who has a persistent cough probably has tuberculosis.

Examples of Multiple-Choice Items

Purpose: to test the student's memory of facts.

1. Beginning with the earliest, which is the correct chronological order of the following events? I. The Mexican War. II. The War of 1812. III. The Whiskey Rebellion. IV. The Spanish-American War.
- | | |
|-------------------|-------------------|
| A. III, II, I, IV | C. I, II, III, IV |
| B. II, I, IV, III | D. IV, III, II, I |

Purpose: to test the student's ability to think.

2. Lincoln's Gettysburg Address can be used appropriately as part of an argument in favor of:
- A. The waging of war.
 - B. The waging of peace.
 - C. The commitment to democracy.
 - D. The commitment to reverence.

Purpose: to test the student's understanding.

3. Wieviel haben Sie für das Haus bezahlt?
- A. Jedes Haus ist eine Wohnung.
 - B. Ja, es ist schwer, so viel Geld zu sparen.
 - C. Ich habe das Geld von meinem Bruder bekommen.
 - D. Nicht zu viel; es war billig.

The main advantage of tests composed of such items is that error and bias on the part of the grader are virtually eliminated. Scoring consists merely of laying a key alongside the answers marked by the student and counting the number of correct responses. The small percentage of error that sometimes creeps into hand scoring can be reduced, particularly for students beyond the primary grades, by having them record their answers on an answer sheet, using a special pencil. The answer sheets can then be run through an IBM test-scoring machine which will then give a score unbiased by human error.

The ease with which the so-called objective tests may be scored makes them very attractive to teachers. It takes much longer to construct an objective test than a test composed of supply items, but once it is constructed, its items can be used again and again. Furthermore, it is possible to do a much more extensive sampling of a given area of subject matter, inasmuch as an hour's test might consist of, say, fifty multiple-choice or a hundred true-false items, as compared to the half dozen or so items that might be included in an essay test.

Tests composed of choice-type items are often criticized on the grounds that they measure isolated bits of information. Hence the student who has an ability to pick up odds and ends of factual information appears to be at an advantage, even though he may have no functional understanding of the subject at hand. However, the multiple-choice items given as samples above show that it is possible to design items that measure understanding and the ability to think, as well as memory. Choice-type items are also criticized on the grounds that they do not indicate whether students can *recall* or *reproduce* the right answer without being prompted. Essay items do not, of course, generally provide such clues. However, the second ETS study that we cited showed that it is possible to construct choice-type tests whose results correlate very highly with those of essay tests. Thus it is very likely that the

Educational Psychology in the Classroom

two kinds of tests can be used to measure much the same kinds of competencies for most students.

Another charge often directed against choice-type tests is that they fail to measure the ability of students to analyze and think through problems, to organize their ideas, and to present logical and coherent points of view. There are two counterarguments to this criticism. One is that choice-type items can be designed to measure much more than the ability to recognize correct or incorrect information; they can be designed to measure critical thinking or any other higher-level process the test maker wants to test. The only limitations are the imagination and the skill of the test maker. The other argument is that essays or papers assigned during the course of the school term are better instruments for measuring the student's ability to think on paper and to analyze and develop a subject than are essay questions posed in a midterm or final examination. The stresses and anxieties of the all-too-brief examination period make it difficult for the student to present any kind of a fair sample of his ability to think on paper.

The argument against choice-type tests does gain some validity, however, when we realize that the tests a teacher gives are an important way of communicating his educational objectives. Research has shown that students tend to use different methods in preparing for an examination, according to whether they are studying for a choice-type test or an essay test. Because choice-type tests are so often used to measure limited, informational-type goals, the instructor who uses them exclusively may be giving his students the idea that his educational objectives are concerned solely with isolated bits of information.

There are other forms of so-called objective testing that are also rather widely used. The *completion test* attempts to combine some of the features of the choice-type and supply-type items. We already encountered that type of item in our discussion in Chapter 8, when we described the teaching machines developed by B. F. Skinner. Whereas true-false and multiple-choice items require students to discriminate between correct and incorrect information, the completion test (see Figure 13-2) requires him to recall it. It is thus basically a supply-type test item, but is included among the "objective tests," because the number of possible answers is restricted, thus reducing variability and increasing objectivity in scoring. On the other hand, its scoring is not as objective as that of other choice-type items. For instance, the desired response in the first item in Figure 13-2 is "recoil." Probably most teachers would give full credit as well for "withdraw." But how would one score "try to hide"? It contains some elements of the desired answer, but consists of more than

Directions: Complete each of the following sentences by writing the one word that makes the best sense in the blank at the right.

1. If we shine a bright light on an earthworm that is in the dark it will _____
2. Slipper shells, limpets, and abalones are all _____
3. Moths and butterflies have a long, coiled tongue that really consists of extensions of two _____
4. Fermentation is produced by microscopic plants called _____

FIGURE 13-2. Completion test in life science.

one word. And what should be done about the student who misspells an answer or writes part of an answer?

The *matching test* is really a complex multiple-choice test that attempts to measure the student's ability to recall relationships between pairs of items. It is often used in history courses as a way of measuring the ability to relate names to events, although it may be used in other subjects as well. (See Figure 13-3.)

One variation also used in history courses is that of having students place events in chronological order. Still another variation is that of having students match numbered parts on a diagram or a map with a list of terms, events,

Directions: In the blank preceding the names of each of the psychologists in the left-hand column, write the letter identifying the area of research with which he is identified.

Psychologists	Research Areas
_____ 1. Lewin	a. Laws of learning
_____ 2. Havighurst	b. Sociometry
_____ 3. Ojemann	c. Causal thinking
_____ 4. Bonney	d. Einstellung
_____ 5. Skinner	e. Teenagers
_____ 6. Kounin	f. Child behavior
_____ 7. Sarason	g. Social climate
_____ 8. Remmers	h. Anxiety
	i. Developmental tasks
	j. Teaching machines
	k. Early childhood development
	l. Late-maturing adolescents

FIGURE 13-3. Matching test in educational psychology.

Educational Psychology in the Classroom

cities, or other appropriate terminology. The number of varieties of choice-type test items is limited only by the ingenuity of test makers.

Reliability and Validity. One of the outstanding advantages of choice-type tests is that they lend themselves to statistical refinement much more readily than do supply-type or essay tests. For instance, it is relatively easy to gather data regarding the *reliability* of a choice-type test—that is, to measure its consistency, its variability, the extent to which it would give the same results under repeated usage.

An example of an unreliable test would be one consisting of ten true-false items of medium difficulty. The theoretical “chance score” on such a test—the score to be obtained by sheer guesswork—would be 5, inasmuch as the chances are one out of two that any single item would be guessed correctly. This means that there is a span of only 5 points, from 6 to 10, to reflect any knowledge of subject matter. Furthermore, experience will show that some



Audio-Visual Services, Alameda County Schools

The reliability and validity of tests can be improved by standardizing the testing procedure. As the egg timers in this scene indicate, these students are taking a test that is standardized with regard to time limits.

scores in the 6-to-10 range might also be obtained by chance or guessing. If this test were to be given to the same group on two separate occasions, there would probably be much variability between the scores, some persons who scored high on the first administration scoring low the second time, and vice versa, because only a few points separate "high" scores from "low" ones. If the true-false items in question measure only narrow aspects of educational experience, it would also be possible for some good students to get low scores on such a test and for some poor students to get high scores. Such a characteristic would bear a relationship to the factor of validity, which we discuss below, but it is also related to the reliability or consistency of the test.

The reliability of a true-false test (or any kind of test) can be increased by making it longer, assuming, of course, that the items are readable, straightforward and not "tricky," and are within the scope of what students can be reasonably expected to know. This does not mean that ten-item true-false tests should not be used. Actually, if several such tests are given during the school term, and the scores were averaged or cumulated, the results would be about as reliable as a single true-false test consisting of the total number of items involved. In other words, five ten-item true-false tests would be approximately as reliable as one fifty-item true-false test.

Tests can also be checked for *validity*—the extent to which they measure what they are expected to measure. An example of a choice-type or objective test for which validity has been demonstrated statistically is the Scholastic Aptitude Test (SAT) that has been developed by the ETS for use in conjunction with the College Board examinations. The SAT is a general mental ability test whose scores are used by many colleges and universities as a basis for predicting the academic success of applicants for admission. The validity of the SAT is shown by the fact that individuals who score high on the test tend to get superior grades, whereas individuals scoring low tend to get inferior grades. In other words, there is a fairly close relationship between the scores received on the SAT and the grades received subsequently in college work. Therefore, we can say that the SAT is a fairly valid measure of academic aptitude or potential. Incidentally, the SAT is also a highly reliable test. Its several forms give consistent results when compared with one another, and there is a high degree of relationship between the scores made on two different administrations of the same form of the same test.

A test of mechanical ability, however, would be an *invalid* test of academic aptitude, because scores made thereon bear no relationship to grades made in academic subjects. Tests of competence in individual high school subjects, such as biology and foreign languages, would of course be much more valid than mechanical aptitude tests as predictors of success in college, but they

Educational Psychology in the Classroom

would not be as valid as the SAT. We make this point because one might logically assume that a test that measures what one has learned in specific high school subjects would be a better predictor of college success than the SAT, which measures only vocabulary and reading ability.

The validity of a teacher-made test will depend on what the test is supposed to measure. Inasmuch as most tests, even essay examinations, measure rather narrow areas of educational experience, teachers should not assume that a test measures more than it actually does. If one of the objectives of a high school science course is the development of an appreciation of the scientific method, we should not assume that a student who does well at answering informational questions or at solving chemical equations is necessarily appreciative or even aware of the value of the scientific method. It is not even safe to assume that a student who is able to write out a statement about the scientific method has actually developed an appreciation of it.

It is also possible to make unwarranted assumptions about the validity of printed, standardized tests. It is very easy for us to assume that because a test is called an "intelligence test," or a "test of foreign language aptitude," or whatever, it measures what the title says it measures. All too often the necessary research has not been undertaken or the evidence supporting its validity is so slight that the user should have strong reservations about placing any confidence in the results.

The question of validity also arises when a test measures too narrow an aspect of ability or achievement, or when it measures a different dimension or quality of a skill or aptitude than the one the user had in mind. In other words, validity also depends, in part, on how tests are used and how they are interpreted. An intelligence test may be a valid measure of academic aptitude but may be a rather poor or relatively invalid measure of the ability to make certain kinds of decisions which also involve some aspect of intelligence, decisions that might have to be made by, say, truck drivers, personnel managers, or real estate salesmen. The ability to make decisions of all kinds may be included in the test giver's *concept* of intelligence, and he may assume that, because the test he is giving purports to be a test of intelligence, it measures the qualities or abilities he has in mind. He might even say that as far as he is concerned a test that does not measure these qualities is not a test of intelligence. However, whether a certain test measures intelligence or not depends in part on the concept that one has of intelligence. What often happens is that the test and its results are accepted uncritically. As a consequence, important decisions are sometimes based on invalid tests or, rather, on tests that are otherwise valid but have been used in ways that render their results invalid.

The answer to the problem of developing valid tests is twofold. The most important thing to be done is to educate teachers (or teachers-to-be) in the use of tests, by helping them to develop tests of their own that are more effective and more efficient than the ones they have been using and by showing them how to select standardized tests that meet the educational needs of their students. The other important thing we can do is to improve the available standardized tests to make them more reliable and more valid.

In noting that from a fourth to a third of standardized tests scored by teachers have to be completely rescored or reinterpreted in order to make them usable for research purposes, Walter N. Durost (1954) made the following comment and recommendation:

There is plenty of evidence that the basic validity of test results is all too often jeopardized by poor test administration due to careless teacher preparation, misunderstanding and lack of sympathy for the essential purposes of the testing program, and careless or apathetical scoring and interpretation.

Part of the answer to this problem lies in the handling of the training problem. . . . Part, however, is a matter of attitude on the part of the administrative personnel. Superimposed testing programs concerning which the instructional staff has little to say and the outcome of which they may never see do not engender eagerness and interest. There should be democratic participation of the instructional staff in determining what testing and evaluation shall be done.

It appears, then, that the problem of test validity is not entirely one of improving the tests themselves. Also involved are such other problems as the development and maintenance of morale among teachers and the development of democratic relations between teachers and administrators. From what Durost says, it is evident that teachers need in-service training in the use of tests, but if the decision to initiate such training is made by administrators without the participation of teachers, very little practical value may come of it.

STANDARDIZATION OF TESTS

The reliability and validity of tests can be improved by standardizing the testing and scoring procedure and providing standards or norms against which results can be compared and interpreted. The tests that are supplied by reputable educational and psychological publishers are examples of tests that have been standardized by putting them through a number of different procedures before they are published and distributed to the professional public.

Standardized tests exist on every conceivable variable that is of interest to teachers: intelligence, achievement in almost every subject of the curriculum,

Educational Psychology in the Classroom

personality, vocational interest, special aptitudes, and so forth. The usual procedure followed in preparing a standardized test is to engage one or more experts in test construction to work with experts in the educational or psychological variable to be tested. Items are written and directions for administration are formulated for one or more experimental forms of the test. These tests are then administered to sample groups of individuals of the type for which the test is appropriate. In other words, if the test is designed to measure the competence of fourth-, fifth-, and sixth-graders in arithmetic, the test is administered to samples of fourth-, fifth-, and sixth-grade students representing a full range of ability. The test items and directions are then analyzed for flaws. Some flaws will show up in the practical problems that arise in administering or scoring the test; others will show up in the statistical analysis of responses to various items. The test may then go through a number of experimental forms until one or more final forms is produced that meet the specifications of the test makers. These final forms may then be administered to proportionate samples of fourth-, fifth-, and sixth-grade students (reflecting also regional, urban-rural, and social-class differences) in order to gather data on which to base "national norms." The mean or average score for the combined group of children in each grade constitutes the norm score for that grade. With some manipulation of statistics it is possible to produce norms for each month in the three grades covered by the test. A given child may be said, for example, to be at the 5.5 level on the test (fifth month of the fifth grade) or the 6.1 level (first month of the sixth grade). Norms may also be extrapolated to grades above and below the population covered by the test. Thus a sixth-grader who makes a superior score on the test may be said to score at the eighth-grade level, and a fourth-grader with an inferior score may be said to score at the third-grade level. Such "grade placements" are theoretical, of course, because the test in question was not standardized on samples above the sixth grade or below the fourth.

The Growth of Standardized Testing. During the period after World War I, standardized tests began to be used in great quantities. One factor that contributed to their popularity was the growing concern about the unreliability of written examinations. Another factor, perhaps related, was the feeling that the time had come to "take some of the guesswork out of education" and put it on some kind of a scientific and businesslike basis. Administered on a mass basis, standardized tests provided data for hundreds of school surveys during the decades between the two World Wars. Still another factor was the increased number of children from all social levels who began attending school. This more extensive participation of children of all social levels in educational programs is reflected in the fact that whereas the American soldier

in World War I had an average of approximately seven years of education, the average World War II selectee had completed between ten and eleven. The gains were most noticeable in the secondary schools, whose enrollments rose with the enactment of laws postponing school leaving until the teenage years. The schools were thus required to educate large numbers of various kinds of students they had not encountered before; in order to develop some understanding of the potentialities and deficiencies of these new kinds of students, they turned to the new standardized measuring instruments that were being placed at their disposal by the psychological profession.

Most teachers find that the tests they construct themselves are better suited to their everyday needs than are the printed, standardized achievement tests available from test publishers. For one thing, the curricular areas that standardized tests cover are those that are common to a large number of schools and school systems. Hence they are not very useful when it comes to measuring progress toward curricular goals peculiar to a given community, school, course, or teacher. New York City, for instance, has found it necessary to develop and standardize special tests for its program in elementary school mathematics and science, because the available standardized tests did not adequately measure the content and objectives of the local curriculum (Ebel, 1960).

Standardized achievement tests can nevertheless serve very useful purposes. They help answer the question: "How does the achievement of my students compare with that of students in other schools with regard to basic skills and information?" Standardized achievement tests can provide a precise, though partial, answer to this question. We say "partial," because there are many factors that enter into the measurement of educational competence. Decimals and fractions are not introduced in the same grade in every school; a school that has decided to introduce them later rather than earlier may find that its students appear to be retarded when compared on a standardized test to those of other schools. Or a high school English department may have developed a curriculum based on the writings of contemporary authors. A standardized achievement test in literature that has been developed on the assumption that high school students are familiar with *Ivanhoe*, *Silas Marner*, and *Twelfth Night*, would hardly provide a fair measure of the effectiveness of teachers or the competence of students in that high school.⁴

Standardized Achievement Test Batteries. The difficulty of finding standardized achievement tests that are suited to the curriculum is more aggravated

⁴ Some test publishers provide local norms for their tests in an attempt to compensate for this deficiency.

in secondary schools than it is in elementary schools, partly because there is less agreement as to what should be learned during these years than during the first few years of school. Everyone agrees that children should learn to read, write, and cipher, and should acquire a fund of basic information about our national and cultural heritage and the world around us. But as we go up the educational ladder, there is less and less agreement about the skills, information, and concepts that should constitute the common core of learning. Furthermore, the talents, interests, and aptitudes of children become more varied with each year of development. What this means is that "batteries" of achievement tests are somewhat less useful in secondary schools than in elementary schools.

Most school systems use some kind of an achievement battery as a check on the learning of basic skills learned in the elementary grades. Some of the batteries used most extensively are the California Achievement Tests (published by the California Test Bureau), The Iowa Tests of Basic Skills (Houghton Mifflin), the Metropolitan Achievement Tests (World Book), SRA Achievement Series (Science Research Associates), and the Stanford Achievement Test (World Book). Batteries of achievement tests commonly used on the secondary school level (subject to the limitations noted above) are the Essential High School Content Battery (World Book) and the Iowa Tests of Educational Development (Science Research Associates). The California Achievement Tests, the Stanford Achievement Test, and the Sequential Tests of Educational Progress (Cooperative Test Service) have forms for both elementary and secondary schools.

In addition to the batteries of achievement tests, there is a large number of more or less specialized tests for various school subjects. Some are concerned with subject areas included within the scope of test batteries; some of them, such as the diagnostic tests of certain arithmetical processes, deal with highly specific skills and areas of information; and some deal with subjects outside the traditional curriculum, such as music appreciation, draftsmanship, bookkeeping, and Russian. Diagnostic tests can be useful tools in the hands of the teacher who is able to make the "leap in logic" between the kinds of learning processes covered by the test and those covered in his teaching. A diagnostic test of reading, for example, may report that certain students are deficient in "following directions." It is thus up to the teacher to figure out what he must do to improve their ability to comprehend printed directions. The means for correcting the deficiency is seldom obvious from the nature of the finding reported by the test.*

One practical way of using an achievement test diagnostically is that of studying the papers of students who score low on the test. A review of the

kinds of errors they make may provide clues as to possible areas of concentration for remedial instruction.

Most achievement tests used in the secondary schools are concerned principally with skill processes and the ability to recall information. The Essential High School Content Battery is a good example of a battery using this approach. The Iowa Tests of Educational Development (ITED), however, attempt to measure a more functional kind of outcome. Competence in social and natural science, for example, is measured by the ability to interpret reading materials in these fields. Other tests in the ITED battery are equally concerned with a dynamic and functional, rather than a static, approach to learning. *Understanding, thinking, and the ability to apply knowledge* are stressed by the authors and publishers. Although some of the tests and test items in the ITED are not very different from those found in more conventional batteries, the character of most of the tests indicates that the authors are attempting to measure a much broader aspect of learning than that covered in most achievement tests. The extent to which they are successful is indicated by a study by Ralph C. O'Neill (1959) which showed that the ITED correlated higher with college grades than a conventional college aptitude test (the American Council on Educational Psychological Examination).

Teachers often ask: "How can we decide which is the best test to use?" This is a difficult question to answer in any kind of definitive way. The *Mental Measurements Yearbooks*, edited by O. K. Buros (Gryphon Press, Highland Park, N.J.), provide useful information regarding the validity and reliability of every standardized test that has been published, but the interpretation of this information takes a considerable amount of sophistication in testing. Test manuals themselves are also useful sources of information. But the best advice that can be given the teacher in search of the ideal test for his situation is to consult an expert in testing. Most large-city school systems have bureaus of guidance or bureaus of educational research that have test experts on their staffs, and test experts are often attached to the staffs of county and state superintendents' offices.

➤ **Interpreting Test Results.** Most of the tests used in elementary schools provide scales whereby the results may be translated into grade placement. Such scales enable the teacher to see how his students compare with the average scores made by other children their age. For example, Joe may have completed four months of the seventh grade, but his achievement-test results show him to be at the eighth-grade-and-four-months norm in arithmetic fundamentals. The test profile of a student with such a record is depicted in Figure 13-4. Publishers sometimes provide scales whereby scores can also be converted into "ages"—reading age, arithmetic age, and so forth.

TEST	SECTION	POSSIBLE SCORE	STUDENT'S SCORE
1. READING VOCABULARY	A. Mathematics	15	8
	B. Science	15	7
	C. Social Science	15	10
	D. General	15	11
	TOTAL (A + B + C + D)	60	36 7.8 60
2. READING COMPREHENSION	E. Following Directions	15	6
	F. Reference Skills	26	8
	G. Interpretations	45	12
	TOTAL (E + F + G)	86	26 5.9 20
	READING GRADE PLACEMENT		6.9 40
3. ARITHMETIC REASONING	A. Meanings	15	9
	B. Symbols, Rules, and Equations	25	9
	C. Problems	15	5
	TOTAL (A + B + C)	55	23 7.4 60
4. ARITHMETIC FUNDAMENTALS	D. Addition	20	14
	E. Subtraction	20	16
	F. Multiplication	20	11
	G. Division	20	13
	TOTAL (D + E + F + G)	80	54 8.4 80
	ARITHMETIC GRADE PLACEMENT		7.9 70
5. MECHANICS OF ENGLISH	A. Capitalization	30	22
	B. Punctuation	29	11
	C. Word Usage	40	28
	TOTAL (A + B + C)	99	61 7.3 50
6. SPELLING	TOTAL SPELLING	30	18 7.5 60
	LANGUAGE GRADE PLACEMENT		7.4 60
	Handwriting		7.0
	BATTERY GRADE PLACEMENT		7.4 60
	CHRONOLOGICAL AGE GR. PL.		7.1
	ACTUAL GRADE PLACEMENT		7.4
	INTELL. (M.A.) GRADE PLACE		8.0
	Grade Placement		
	Percentile Rank		

DIAGNOSTIC PROFILE (Chart Student's Scores Here)

Grade Placement

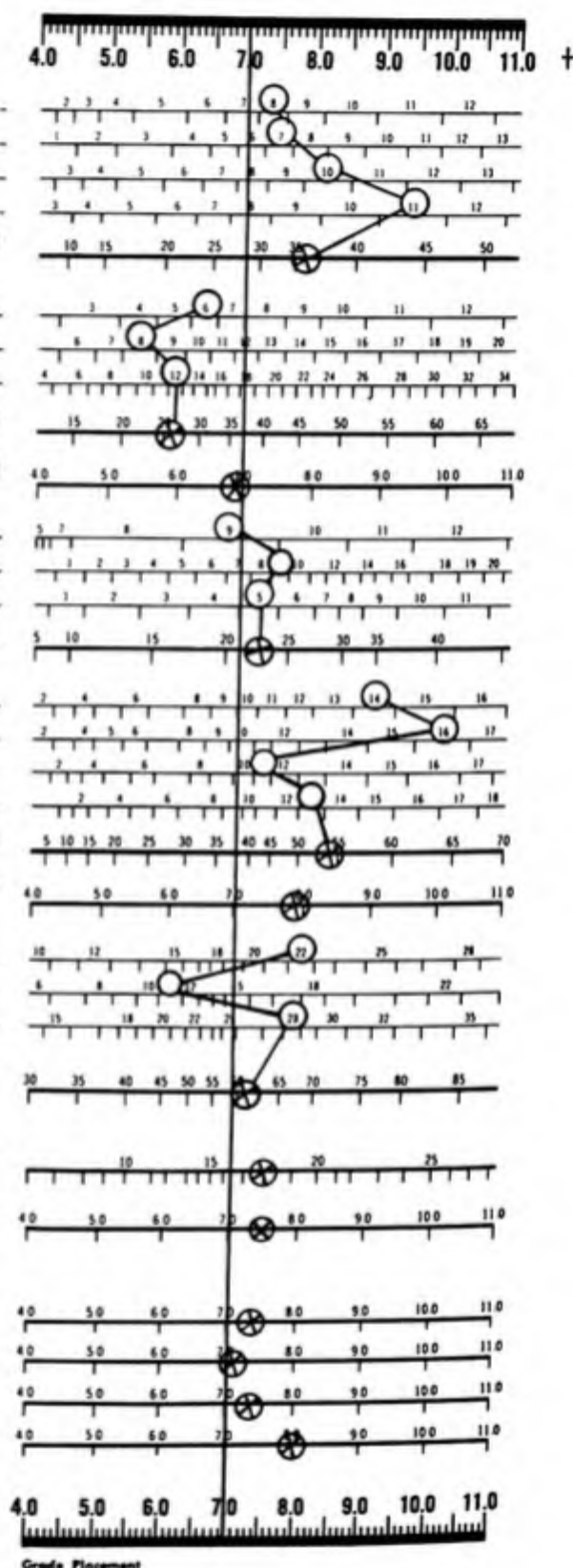


FIGURE 13-4. Profile scores made on the California Achievement Test battery by a student in the low seventh grade whose chronological age was 149 months and whose mental age was 160 months. (Tiegs and Thorpe, 1957.)

Although publishers provide grade-placement scales for use with high school students, such norms are less meaningful at this level, because older students vary more widely in their skills and experts are less in agreement about what knowledge and abilities are appropriate to each of the grade levels in secondary schools. Percentile scores or ranks are therefore much more commonly used with this population. Percentile scores will be found in Figure 13-4 entered in the right-hand column of figures at the center of the form.

Percentile rankings are *not* the same as the percentage grades that were popular in most schools a number of years ago (100 was "perfect"; 60, 65, or 70 was "passing"). Instead of being a comparison with some presumably fixed standard of excellence, which was the concept underlying percentage grades, percentile rankings represent comparisons with the scores of other persons taking the test. The individual whose score is equal to the 70th percentile has a score higher than those attained by 70 per cent of the individuals taking the test; and the individual who scores at the 32nd percentile has a score higher than 32 per cent of the individuals taking the test. The relative position of an individual in his group can thus be stated with some precision. Although the use of percentile rankings has some statistical weakness, it is a very convenient way of reporting and comparing scores. This weakness amounts to a tendency to overstate the differences around the 50th percentile (the middle of the distribution) and to understate differences at the ends of the distribution.

This tendency of percentile scores to distort differences among pupils has led to an increased preference for a more accurate system of reporting scores. This system is based on the normal curve of probability, that is, the distribution of scores that tends to result when measures or scores on most variables (height, weight, intelligence, reading ability, or whatever) are ranked in order from highest to lowest. As Figure 13-5 shows, such a distribution assumes the form of a bell-shaped curve, with most of the scores clustered in the middle, and with only a few scores at the high and low extremes. There are certain dividing points in the distribution, which can be expressed in terms of standard deviations, or differences from the midpoint or mean of the distribution. Note that about 34 per cent of the scores fall between the mean and a point one standard deviation removed. About 48 per cent of the cases fall between the mean and a point two standard deviations above or below. In other words, almost 96 per cent of the scores will be expected to fall between a point two standard deviations below the mean and two standard deviations above.

A glance at the scale of percentile scores arrayed below the curve in Figure 13-5 shows how they distort student performance as measured by tests.

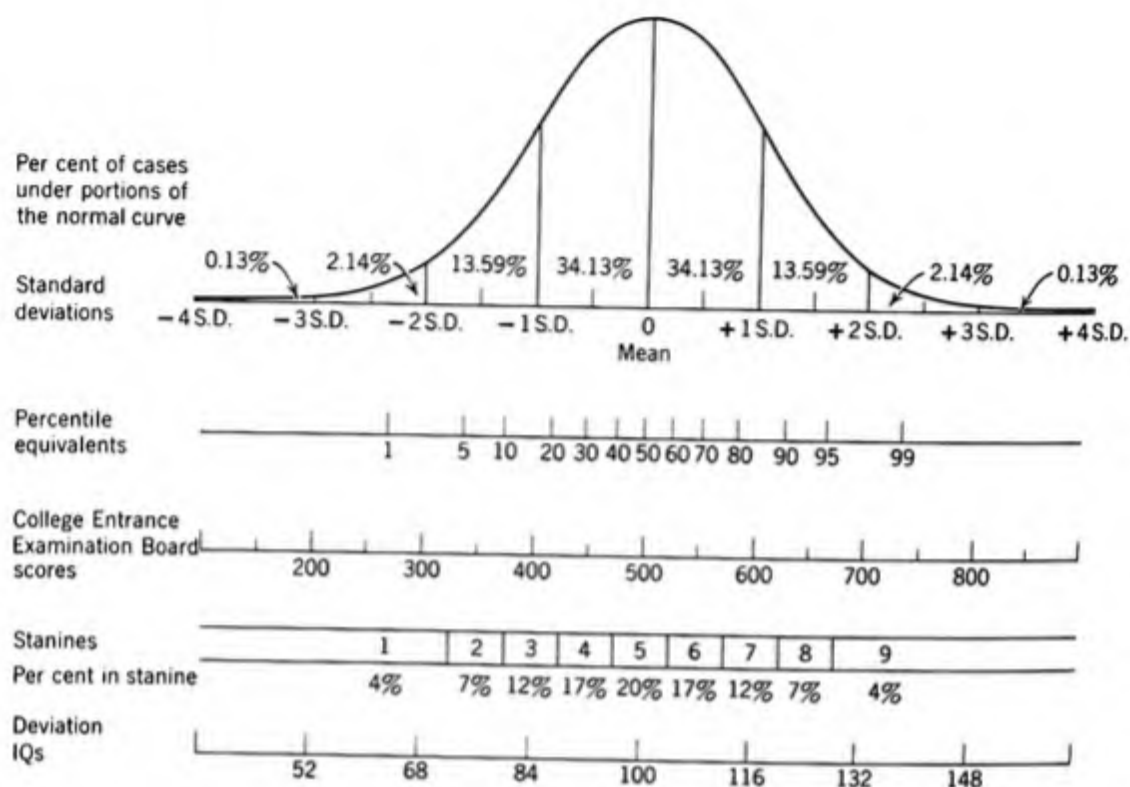


FIGURE 13-5. Normal curve of distribution, showing standard deviations, percentile scores, stanine scores, and deviation IQs.

The difference between students scoring at the 50th and the 60th percentiles is actually slight, but the difference between students scoring at the 90th and the 99th percentile is considerable.

It is because percentile scores invite such distortions that test publishers are encouraging teachers to make use of "stanines" when using and interpreting test results. Stanines are so called because they are based on standard deviations from the mean and consist of nine divisions of the full normal range. The seven central divisions are equal in terms of the amount of the variable being measured, and the top and bottom stanine scores represent the ends of the distribution. The scale below percentile scores in Figure 13-5 shows the dividing points for stanines, as well as the percentage of cases that are included in each stanine score. There are other types of score-reporting systems that are based on the functions of the normal curve. Interested readers are referred to the texts on measurement listed at the end of this chapter for description and explanation of these systems.

State and National Testing Programs. There has been in recent years a growing pressure to institute statewide and nationwide programs of testing

as a way of assessing the quality of education in various parts of the country. Some of this pressure has come from people who feel that the schools are failing in their job, that they are not making as many demands on students as they used to. Other pressure has come from civil rights groups, who want evidence to show that children in certain areas, communities, or schools are not being brought up to the educational level attained elsewhere. Even more recently, Federal and state governments have begun to require that school districts making use of special funds to improve educational offerings, particularly those involved in antipoverty or cultural enrichment programs, undertake some kind of standardized evaluational testing in order to show whether the new programs are obtaining the expected results. The State of California has, for example, instituted a program of providing special financial aid to schools in which the reading ability of children is below a certain level. School districts are required to administer standardized reading tests in each of the first three grades in order to provide the information on which the allotment of the subsidy is to be based. California also has a program to test intelligence and school achievement at certain points in elementary and high school in order to gather data on the intellectual and educational status of students in various parts of the state.

There are some compelling arguments on both sides of the question as to whether state and Federal agencies should turn to mass testing as a way of evaluating educational programs. The best argument in favor of such testing is that we need to know which communities and regions are deficient, educationally speaking, and need special attention and extra funds in order to bring about needed improvements. The California program to improve reading instruction in low-scoring schools is of that nature. After the money has been spent and the special help provided, additional testing is of course needed to see whether the intended results have been achieved.

There are several arguments against the use of standardized tests in this way. There is the question of whether scores on a single test or series of tests are adequate measures of the quality of an educational program. There is a natural tendency to assume that there is poor teaching in a school that scores low on achievement tests, whereas it is more than likely that the students come from socioeconomic levels that are below the norm. Perhaps the students and teachers in the school in question are doing their best in spite of handicaps, or perhaps they are not, but test scores tell us nothing about the amount and kind of effort that has gone into the educational program. Some figures from the California testing program show how easy it is to make false interpretations. Table 13-1 presents results of the California Achievement Test in reading comprehension and reading vocabulary given

TABLE 13-1. California Students' Mean IQs and Mean Scores on the California Achievement Tests of Reading Comprehension and Reading Vocabulary, as Compared with National Norms for Each Test and Each Grade—1962 to 1964 (Superintendent of Public Instruction, State of California, 1965)

Grades	Henmon-Nelson IQ			Reading Comprehension			Reading Vocabulary		
	1962	1963	1964	1962	1963	1964	1962	1963	1964
5	107	107	106	105	105	105	107	107	107
8	104	104	105	104	104	104	108	108	111
11	102	101	101	100	100	100	103	103	103
National norms	100	100	100	100	100	100	100	100	100

to grades five, eight, and eleven throughout the state during the years 1962 to 1964. California elementary and junior high school teachers seem to be doing an unusually good job, because the mean scores their students made in the fifth and eighth grades are well over the national norms of 100. However, another interpretation is that California is a largely urban state, and that it is to be expected that its children would average higher than the national norms, which include a larger percentage of rural children. But what about the scores attained in the eleventh grade? Do they not suggest that California education deteriorates in high school? That is one possibility, but a more reasonable explanation lies in the fact that the legal school-leaving age is higher in California than in other states.⁵ When less interested and less apt students are permitted to drop out early, the average academic level of the students who are left is proportionately higher. California high schools may be doing an excellent job by retaining such a high proportion of poorer students, but their success makes their record look *relatively* poorer than that of other states. The validity of this interpretation is supported by the data on IQs, which show a corresponding drop between the fifth and the eleventh grades.

The point is that statistics which report the results of statewide testing, or even community-wide testing, require a great deal of careful interpretation when they are communicated to persons unfamiliar either with statistics or with the complex variables that lie behind them. When such interpretations are made to laymen, there is unfortunately a tendency for them to feel that school people are being overly defensive and are probably trying to "hide something" in their attempts to disprove what seems to the laymen to be

⁵ California ranks first of the fifty states in high school "holding power." Almost 90 per cent of students entering the ninth grade stay on to graduate (National Education Association, 1964).

simple and obvious. Indeed, the layman's insistence on simple, clear figures is likely to be unrealistic when it comes to measuring such a complex and ambiguous social process as education.

Another argument against the use of statewide systems of testing is that it tends to "freeze" curricula and teaching methods. The anxieties of teachers and administrators are aroused when such tests are scheduled, because they want their classes and their schools to "look good." The courses of study are reworked in order to match the content of the tests, which means that the curriculum of the school becomes determined by the test publisher and his staff. In some schools the energies of the teachers become organized around a single objective: to prepare students to do well on the examination. When this distortion of educational goals occurs, the more significant objectives—teaching students to think, the fostering of positive attitudes about learning, and the like—are relegated to the background or dropped altogether. There comes a renewed emphasis on drill and memorization, in spite of the admonitions of the test publishers that it is of little avail. Such activities may actually be enjoyed by the more obedient, conforming, and competitive children, who are always on the lookout for ways to secure the admiration of parents and teachers, but the reaction of students who are not so positively oriented to adults will vary from apathy and boredom to downright hostility. The tendency of the more rebellious students to drop out of school is always a problem; when the school program becomes oriented toward preparing students to do well in statewide examinations, such tendencies are bound to increase.

When the main objective of an educational system becomes the preparation of students for examinations, teachers feel even less inclined than ordinarily to experiment with instructional methods or make improvements in the curriculum, because they are afraid that any deviation, no matter how slight or how much promise it might hold for the improvement of the learning situation, may result in students' making lower marks on state examinations.

Reporting Pupil Progress. Another chronic controversy in education is centered around the problem of reporting educational progress to students and their parents. There seems to be little general agreement on what kind of reports should be made or what the reports should signify.

A generation or so ago, school marks or grades were regarded primarily as a means of reporting the degree of academic proficiency displayed by the student—the more competent the student, the higher the grade, and vice versa. There is more of a tendency today, however, to favor systems of marking that are more obviously related to progress in learning. A single mark, such as a "B" or a "79," actually tells us very little. What most educators favor, at least in the elementary schools, is a report that summarizes the progress stu-



Sybil Shelton from Monkmeyer

Teachers' evaluations of a student's progress in learning inevitably involve his parents, who cannot help feeling that his success or failure reflects on them.

dents are making, what might be expected of him, and the kinds of problems he is having. Conferences with parents are especially desirable in communicating this kind of information. Here are some suggestions made by Clarence Mahler and Harry Smallenburg (1963) that should be helpful:

1. Report to the parents in terms of the child's achievement in relation to his capacity—how he is developing in relation to his strengths and limitations.
2. Report on the child's attainments in any learning situation in relation to the others in his group.
3. Report also on the child's aptitudes and achievements in relation to the larger numbers of children beyond his particular school and community—by reference to published norms.
4. Make certain that parents and teachers share observations about the child. The teacher should listen rather than lecture.

5. Differences in points of view should be respected.
6. Avoid comparison of the student with individual classmates.
7. End conference on a constructive note of confidence in the child and his development. Consider all aspects of the child's growth—not just intellectual.

Like any other kind of school activity, the reporting of pupil progress should contribute to the increased effectiveness of learning. To be sure, teachers have traditionally used failing marks as a goad for lazy and less competent students, and have awarded high marks as a kind of prize to students whose achievement was especially pleasing. The efficacy of this approach, like that of other traditional approaches to learning, is rather questionable. Psychological research *does* show that learning is facilitated if students are informed of their progress, but it does not support the idea that a single grade really communicates very much information. Furthermore, the same criticisms can be made of the single course grade that we have made of the marking of essay tests: there tends to be considerable variation among teachers, as well as variation within the standards of a single teacher. In addition, there is variation among schools and subjects. It is common experience in colleges, for instance, for science and mathematics instructors to assign more D's and F's and fewer A's and B's, and for instructors in, say, music and art, to assign higher proportions of A's and B's and lower proportions of D's and F's than is typical of the college as a whole. There is some evidence to show that these differences are due to differences in the personality traits characteristic of the teachers in each of the fields, rather than to any intrinsic difficulty of the subject matter.

Although there is probably an overall relationship between grades and achievement, it is by no means a very close one. Girls characteristically receive higher marks than boys, as we have shown elsewhere, even though their levels of achievement, as measured by standardized tests, are approximately the same. Other data tend to show that students who are obedient, conforming, and industrious tend to receive higher grades than those who are rebellious, nonconforming, and lazy, even though the amount of learning according to objective measures may be the same. What such findings mean is that grades are influenced by some factor or factors other than progress in learning.

Although grades are subject to the variations we have noted, they do tend to have a certain overall consistency. The grade-point average of students tends to be rather consistent from one semester to another, and high school grades are the most effective predictors of college success—better, even, than all the batteries of college entrance examinations. What this means is that college instructors are inclined to use much the same criteria that are used

by high school teachers in assigning marks. This rough consistency indicates that grades *do* measure something. What they measure is by no means certain, but it is likely that they are a kind of "index of academic adjustment"—that is, they show how a student has been able to adjust or adapt his behavior to the expectations of teachers. To the extent that the behavior of a student is similar in various classes and to the extent that teachers have similar expectations of students, to the same extent will the student receive similar grades. The rough consistency among grades, therefore, appears to reflect consistencies in student behavior and teacher expectations.

Although we have taken the stand that the major concern or objective of the schools should be the stimulation and encouragement of learning, traditional schools are very much concerned about a second objective—that of selection. In some school systems, notably in Europe, selection has become a more important function than the stimulation and encouragement of mental growth. Such an arrangement makes better sense in more traditionally oriented cultures, in which the social structure is rigidly predetermined and a major task of the schools is to sort out and assign graduates to preexisting positions in society. In the United States and Canada, where positions in the economic and social structure are more freely accessible than they are in Europe, there is need for an educational plan that stimulates mental growth and encourages students to attain the best potentialities. This can best be done by a system of evaluation and grading that is organized to promote and stimulate learning, rather than one that is organized to supply a sufficient number of candidates—and no more—to fill the small number of vacant positions in a static economy.⁶

SUMMARY

Evaluation consists of the identification, measurement, and interpretation of changes in students' behavior or performance that have occurred as a result of learning. It is much more than giving tests, examinations, and grades. Evaluation should ideally follow these steps: formulating curricular goals,

⁶ During the 1950s, the European economy entered a new phase of development and has been showing signs of expanding even more rapidly than the economy of the United States and Canada. The increasing number of higher level positions to be filled is one factor that is leading Europeans to reexamine their educational philosophy. Consequently, there has been an increasing tendency to deemphasize the selective function of European schools and to introduce methods and curricula calculated to stimulate and encourage mental growth, the development of problem-solving ability, and the learning of the kind of skills needed in societies that are characterized by an expanding technology, greater social mobility, and an increasing degree of openness and accessibility.

defining goals in terms of behavior of the learner, identifying situations in which learners can be expected to display progress toward the objectives, and selecting or constructing instruments that will provide data that can be used for evaluation. The teacher's role as an evaluator is in the nature of his being an observer. It is a role that he must carry out in addition to his role as a participant in the teaching-learning process. If he fails to evaluate, others, who are not as well acquainted with his goals and objectives, will do it.

Although tests and examinations are probably the most frequently used educational technique, they actually measure only a small segment of learner behavior. Success in attaining some of the more significant educational objectives cannot be measured by tests but must be identified by other means, such as the observation of behavior in various situations. However, because of their obvious advantages, tests and examinations will always play an important role in evaluation.

Feedback of evaluational information to the learner enables him to correct or adjust his attempts at learning and also helps to maintain his interest in the material learned. Anxieties about evaluation could be reduced if both teachers and learners would realize that marks and test scores are relative and not absolute.

At one time, evaluation was based largely on recitation and oral examination. This method was not only inefficient, but produced results that were inaccurate. The written or essay examination began to replace oral methods during the nineteenth century. Although essay examinations are an improvement over oral examinations, they tend to be an unreliable measure of learning. Not only are there great variations in the way different teachers mark a given examination paper, but a teacher may also vary from time to time in the marks he assigns a given paper.

The development of choice-type items has enabled teachers to eliminate bias from the marking of examinations. The term "objective," which is commonly used to refer to tests made up of choice-type items, is actually a misnomer. Inasmuch as subjective factors enter into the writing of the test items and the selection of the dimension of learning on which the items are based, the only objective thing about them is their scoring. Some common forms of choice-type items are the true-false, multiple-choice, completion, and matching. Tests composed of choice-type items have sometimes been criticized because they measure the student's ability to recognize correct answers, rather than the ability to produce them himself. However, it is possible to develop choice-type items that can measure almost any kind of mental process the test maker wishes.

The reliability or consistency of objective tests can be checked by adminis-

tering a test twice (or by administering two comparable forms) and comparing the results. If the scores of students change markedly from one testing to the other, the test probably lacks reliability. In general, longer tests are more reliable than shorter ones.

The extent to which a test measures what it is expected to measure is its validity. Validity may be checked by comparing the results of the test with some other objective criterion—for example, the scores on a college-entrance examination can be checked against actual success in college. The validity of teacher-made examinations is more difficult to check. Teachers are on sounder ground if they assume that their tests measure only narrow areas of educational experiences rather than some of the broader and more basic objectives of the curriculum.

Whether a test is valid depends a great deal on how it is used and interpreted. A test may be valid in one situation but not in another. Or it may be valid in measuring what it was intended to measure but not in measuring what the test giver thinks it measures. The problem of validity can be approached and solved both by helping teachers to gain a better understanding of tests and by improving existing tests.

Educational performance can be measured by standardized tests which are more reliable than teacher-made tests and which provide norms based on large samples of students. Results of such tests are reported in terms of grade placement (particularly for elementary school subjects), percentile scores, and stanines.

Standardized tests are useful when teachers want to compare the achievement levels of their students with national norms, or when they are looking for diagnostic information regarding the learning problems of their students. Such tests are also used extensively in national and statewide testing programs in order to provide data for school boards and government agencies regarding the educational attainment of students in various areas. Because such tests measure only a limited aspect of the goals of the school, there is a danger that laymen will read too much into reported results. Results can also be misleading without expert interpretation.

The reporting of pupil progress is an area that is fraught with controversy and confusion. Teacher-parent conferences appear to be the most effective way of reporting evaluation of students' work. Progress reports should be used to promote learning, but many teachers use them as rewards or punishments. Although grades are supposed to measure what students have learned, they very likely measure other factors as well—for instance, the ability of students to adjust or adapt their behavior to the expectations of teachers.

SUGGESTED PROBLEMS

1. Write up some of the objectives for a college course you are currently taking. Be sure that you state them in terms of changes that will presumably take place in student behavior as a result of the course. How would you go about evaluating a student's progress in the course in the light of the objectives you have drawn up?
2. What are some of the objectives of high school or elementary school education that do not figure in the kinds of tests and examinations that are commonly given?
3. Devise a series of test items based on this textbook, using the following types: essay, true-false, multiple-choice, completion, and matching. Try to devise items that will measure students' ability to apply what they have learned to the solution of realistic classroom problems.
4. What are the arguments for and against the use of "pass-fail" grades in high school and college, as contrasted with the grading systems now being used?
5. Every spring the Educational Testing Service of Princeton, New Jersey, gives the National Teacher Examinations on behalf of school departments which are looking for new teachers. These examinations are to a large extent concerned with knowledge and application of educational principles. Let us assume that a superintendent of schools is trying to decide whether he should use these examinations in the selection of teachers. What would be the arguments for and against their use? How valid are these arguments? What would the superintendent probably want to know about these examinations before making a decision?

SUGGESTED READINGS

- Ahmann, J. S., and Glock, M. D., *Evaluating pupil growth*, 2nd ed. Boston: Allyn and Bacon, 1963. A useful and fairly thorough treatment of the problems of measurement and evaluation likely to be encountered by teachers.
- Chauncey, H., and Dobbin, J. E., *Testing: its place in education today*. New York: Harper and Row, 1963. A brief paperback concerned largely with standardized tests and test batteries.
- De Cecco, J. P., ed., *Human learning in the school*. New York: Holt, Rinehart, and Winston, 1963. The last section is concerned with educational measurement.
- Ebel, R. L., *Measuring educational achievement*. Englewood Cliffs, N.J.: Prentice-Hall, 1965. Strong on techniques used with teacher-made tests.
- Engelhart, M. D., *Improving classroom testing*. Washington: National Education Association, 1964. Pamphlet No. 31 in the series "What research says to the

Educational Psychology in the Classroom

- teacher," a joint production of the Department of Classroom Teachers and the American Educational Research Association, both departments of the NEA.
- Gronlund, N. E., *Measurement and evaluation in teaching*. New York: Macmillan, 1965. A standard text in evaluation with a practical orientation.
- Henry, N. B., and Richey, H. G., eds., *The impact and improvement of school testing programs*. 62nd Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1963.
- Lindgren, H. C., *Mental health in education*. New York: Holt, 1954. See Chapter 18, "Evaluation and diagnosis."
- Lyman, H. B., *Test scores and what they mean*. Englewood Cliffs, N.J.: Prentice-Hall, 1963. A simply written paperback manual covering the essentials of measurement. See particularly the chapter on reporting test scores.
- McLaughlin, K. F., ed., *Understanding testing: purposes and interpretations for pupil development*. (Pamphlet OE-25003) Washington: U.S. Office of Education, 1960. A very useful pamphlet available for 25 cents from the Government Printing Office.
- McLaughlin, K. F., *Interpretation of test results*. Washington: U.S. Office of Education, 1964. A useful 30-cent pamphlet that explains the construction and selection of tests in simple language. Obtainable from Government Printing Office, Cat. No. FS5:2 25:25038.
- Ripple, R. E., ed., *Readings in learning and human abilities*. New York: Harper and Row, 1964. The last section deals with measurement and evaluation.
- Smith, E. R., et al., *Appraising and recording student progress*. New York: Harper, 1942. A description of some of the experimental measuring instruments used in the Eight-Year Study and how they were developed.
- Stanley, J. C., *Measurement in today's schools*, 4th ed. Englewood Cliffs, N.J.: Prentice-Hall, 1964. A standard text on educational measurement; strong section on statistics.
- Thomas, R. M., *Judging student progress*, rev. ed. New York: Longmans, Green, 1961. A practical, down-to-earth handbook.
- Thorndike, R. L., and Hagen, E., *Measurement and evaluation in psychology and education*, rev. ed. New York: Wiley, 1961.
- Van Dalen, D. B., *Understanding educational research: an introduction*. New York: McGraw-Hill, 1962. For those who want to go on from the evaluation of classroom learning into more complex problems of research.
- Wood, D. A., *Test construction: development and interpretation of achievement tests*. Columbus, Ohio: Merrill, 1960. A useful, low-priced handbook.

14 Measuring Individual Differences



Ken Heyman

The Measurement of Individual Differences. It is said that scientists first became aware of the importance of individual differences as the result of an incident that occurred in 1796 at the Royal Observatory at Greenwich. A laboratory assistant named Kinnebrook was dismissed from his post because of a consistent difference of eight tenths of a second between his observations of the transit of stars and those of the Astronomer Royal. The difference was, of course, assumed to be due to Kinnebrook's incompetence. Some twenty years later he was vindicated, when an investigation showed that he was right and the Astronomer Royal was wrong. The results of the investigation showed that people tend to differ in reaction time, that such differences are quite normal and usual, and that they probably differ in other characteristics as well. The scientific world was greatly annoyed at this discovery, because it raised questions about the accuracy of observations that scientists make during research. However, as time went on, physiologists and psychologists became interested in measuring these individual variations, and this interest led eventually to the development of the field of psychological measurement. Perhaps the most important and most significant measuring device to appear during the early years of psychology was the intelligence test.

THE MEASUREMENT OF INTELLIGENCE

Individual Intelligence Tests. The pioneer intelligence tests were not the printed booklets of multiple-choice items that are so familiar today, but were schedules of tasks, scaled according to the maturity of the person being tested. In 1905, Alfred Binet of Paris developed the first widely used intelligence test: the Binet-Simon Scale. He was concerned with the problem of identifying children who were not benefiting from instruction because of low

intellectual capacity. By using Binet's scale, examiners could find out whether a child had the capacity to perform the tasks that could be successfully completed by the average child of his age. To the degree that a child could *not* perform these tasks, he was considered intellectually retarded for his age, and to the degree that he could perform *more* than his quota of tasks, he was considered intellectually advanced. It was thus possible to think of a child's "mental age" as something apart from his chronological age. For example, a child of eight might be able to perform no tasks more complex than those performed by a child of six. His mental age would therefore be six years.

The Binet-Simon test came to the attention of Henry H. Goddard, who translated it into English and used it with American children in 1908. A revision was also translated by Frederick Kuhlmann in 1912. In 1916, Lewis Madison Terman of Stanford University published still another revision of the test, which he called the Stanford-Binet Scale, together with norms based on a fairly extensive sampling of American children. The Stanford-Binet received widespread acceptance, and even today is a standard against which many intelligence tests are checked.

The results obtained by administering a Stanford-Binet to a child may be reported both as mental age and as intelligence quotient or IQ. With the earlier forms of the test, the IQ was obtained by dividing the mental age of a child by his chronological age and multiplying the result by 100 (to avoid the bother of decimals). This formula can be expressed algebraically as

$$100 \frac{\text{M.A.}}{\text{C.A.}} = \text{IQ}$$

In other words, the child of eight, already mentioned, who had a mental age of six, would be considered to have an IQ of 75. A child of ten with a mental age of twelve years and six months would have an IQ of 125. The IQ is a way of expressing a child's actual rate of mental growth as a ratio of the expected (that is, "average") rate of growth up to the age at which he is tested. Thus the child of eight with an IQ of 75 shows a slower-than-average rate of mental growth, whereas the child of ten with an IQ of 125 shows a faster-than-average rate of growth.

We have given the older formula for the IQ in order to illustrate the reasoning that lies behind the IQ as an expression of the relationship between chronological age and mental development. This formula is, however, no longer used because of statistical flaws that made for problems of interpretation when it came to comparing IQs that children made during preschool years with those they made during the middle years of childhood. The IQ that has been used with the Stanford-Binet since 1960 is based on the normal

choice should ideally be reserved until the suggested tests have each received a thorough tryout.

Stability and Change in IQ. Although the group intelligence tests available on the market today have for the most part been thoroughly worked

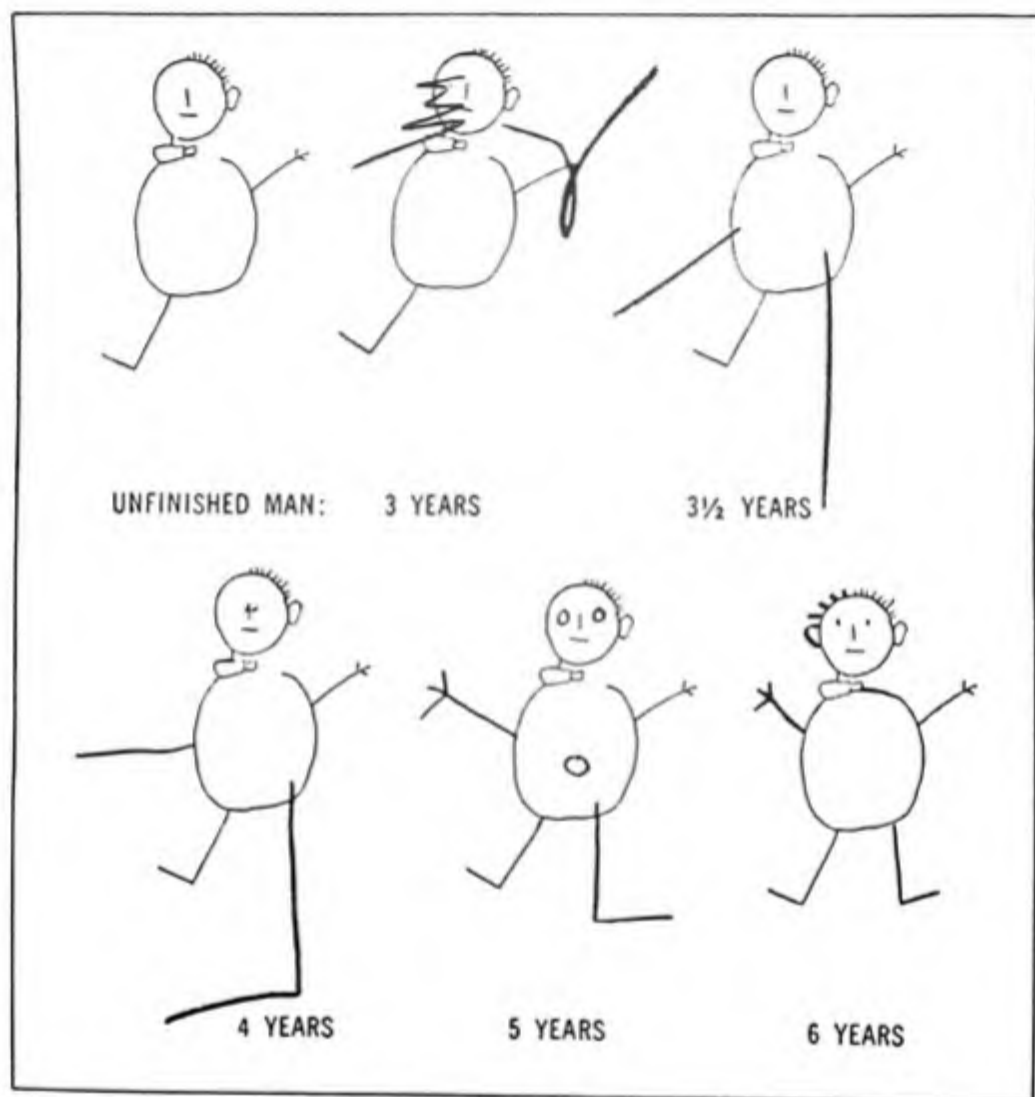


FIGURE 14-1. Tests for preschool children have to be largely nonverbal. The unfinished drawing of a rounded stick man at the left is presented to a child. The examiner says: "What is this? You finish him." What the child says about the man and the way in which he draws additional details gives us clues to his personality and intellectual maturity. Three-year-olds are likely to make meaningless doodles in the general area of the face and arms. Sometimes they add nothing or merely say: "That's not the way to make a man." By three and a half, most children try to put limbs in the right places. With each succeeding year, the average child adds more details and executes them with increasing skill and sense of proportion. (Courtesy Arnold Gesell and "Life Magazine," based on material drawn from A. Gesell et al., "The First Five Years of Life" and "Infant and Child in the Culture of Today," New York, Harper, 1940 and 1943.)

over statistically, they should never be regarded as much more than rough estimates or approximate measures of intellectual ability. In the first place, the scores made by individual children may vary greatly over a period of time, and, in the second place, there are differences of opinion regarding the nature of the "intelligence" that is measured by tests.

IQs tend to be *relatively* stable. That is, the chances are rather good that a child's IQ at age ten will be within 5 points or so of his IQ at age seven. This is another way of saying that if he was somewhat less intelligent than most seven-year-olds, he will probably be somewhat less intelligent than most ten-year-olds. Although such tendencies are in keeping with the general trend of development, wide variations in IQ are not at all unusual. Figure 14-2 shows the mental growth of five boys who each had an IQ of 92 (and, of course, the same mental age) at age seven. The dotted line represents what their mental growth would have been if their IQs had remained at 92. When they were eleven, their mental ages ranged from 100 to almost 170 months, and their IQs from 76 to 129. At seventeen, the range in mental age was from 160 to 225 months, and the range in IQ from 78 to 111.

Marjorie P. Honzik (1948) and her co-workers at the Institute of Child Welfare of the University of California checked and compared the IQs of a group of children from the time they were two until they were eighteen.

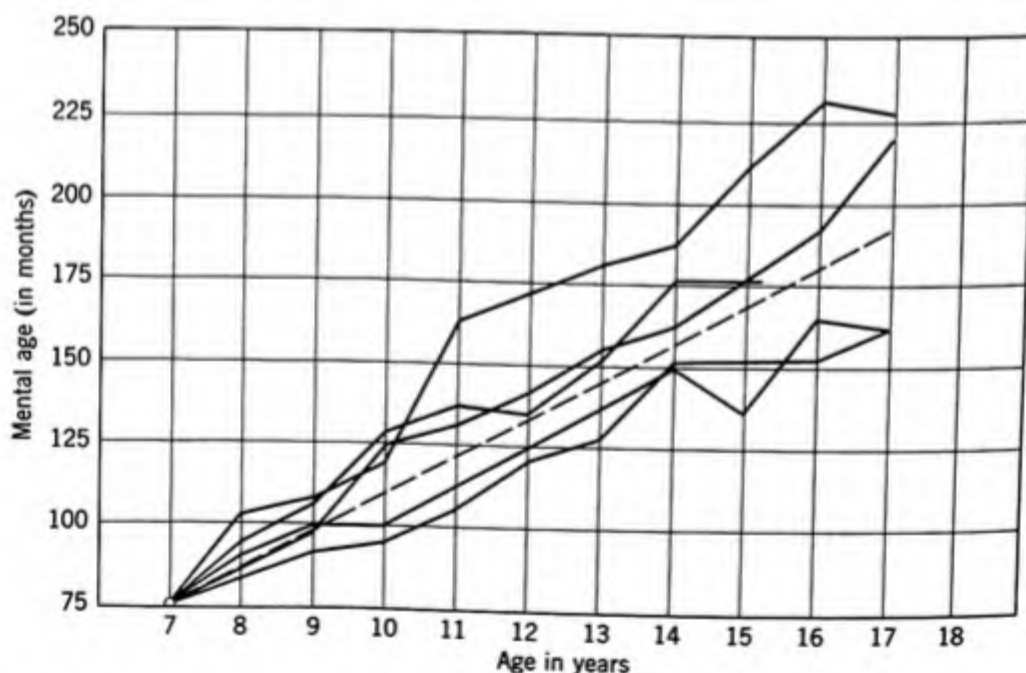


FIGURE 14-2. Variations in mental age for five boys whose initial IQ at age 7 was 92. The dotted line indicates what the growth in mental age would have been had their IQs remained at 92. (Jones and Conrad, 1944.)

They found that the IQs of almost 60 per cent of the children changed 15 or more points between the ages of six and eighteen; a third of the group changed 20 or more points; 9 per cent changed 30 or more points. There was a pronounced tendency for changes in mental-test scores to be in the direction of the family norm as indicated by the parents' education and socioeconomic status. In other words, children with middle- and lower-range IQs tended to have higher IQs as they grew older if they lived in families with upper-middle-class status, headed by college-educated parents, whereas children who had middle- to high-range IQs tended to have lower IQs if they grew up in lower-class surroundings with parents who had grade school education. Children whose scores fluctuated the most also showed unusual swings between disturbing and stabilizing experiences in their lives. Other research comparing IQs of children six- and seven-years old with IQs obtained when they were preschoolers showed similar results. Children whose IQs increased tended to be from families whose socioeconomic status was higher (Wiener, Rider, and Opel, 1963).

Another set of longitudinal studies conducted at the Fels Research Institute for the Study of Human Development, located at Antioch College in Yellow Springs, Ohio, found that 62 per cent of the children tested showed IQ changes of 15 points at some time between the ages of three and ten. Most of the increases observed were for boys, particularly during the school years, whereas most of the IQ declines were girls. Increases in IQs were associated with such personality traits as independence, aggressiveness, self-initiative, interest in problem solving, and competitiveness (Sontag, Baker, and Nelson, 1958). These traits, it should be noted, are usually associated with masculinity in our culture and are also consistent with an Ach.

Work done by Byron W. Lindholm (1964), using data from the Fels Research Institute records, gives us further information regarding the stability of the IQ. He analyzed the IQs for five groups of children who had been tested ten times between the ages of three and twelve. Children in the lowest IQ group (90 to 109) showed the least amount of change, whereas children in the highest group (140 to 169) showed the greatest change. Children in the other three groups showed some change, but, as Figure 14-3 shows, the overall effect is one of stability. For these three groups the year-to-year changes are small, and the net change does not amount to more than ten points.

What these studies indicate is that certain kinds of circumstances can bring about changes in IQ. The vigorous, problem-solving, and competitive child is likely to show gains in IQ, because his mental ability develops at a faster rate than that of his peers. The child whose environment changes for

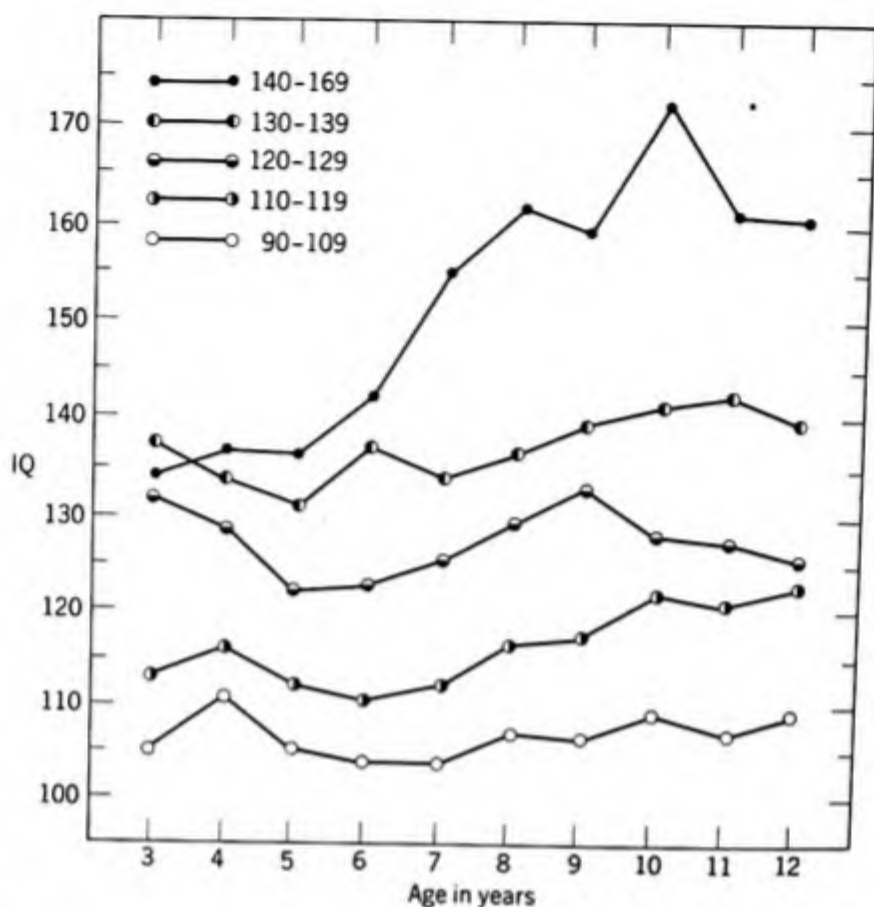


FIGURE 14-3. IQ changes in five groups of children between the ages of 3 and 12. The groups averaged 13 children each and ranged in IQ from 90 to 110 (the lowest group) to 140 to 169 (the highest group). (Lindholm, 1964.)

the better is also likely to show an increase in IQ. Wayne Dennis (1966) of Brooklyn College has been studying the intelligence of children in a Lebanese orphanage for a number of years. All told, he and his assistants tested 112 children between the ages of four months and six years. The average IQ of this group was 53, which is perhaps the lowest mean score ever to be reported for a group of otherwise normal children. Thirty-four of the children were retested a number of months or years after they had been adopted by middle-class families. In each instance, the mental-growth rate of the child, which had been subnormal, approached and in some cases exceeded the normal rate. Children who had been adopted at six years of age had a mean IQ of 77 at age thirteen, and the average adopted child had an IQ of 81, a mean gain of 28 points after adoption. It is evident that the more stimulating family environment resulted in the dramatic gains in IQ. Sally Provence and Rose C. Lipton (1962) came up with similar findings when they made a study comparing 75 institutionalized children with an equal number raised in families. Children raised in families tended to have a decided advantage

when it came to developmental progress. Furthermore, fourteen institutionalized infants placed in foster homes when they were nine-months to two-years old showed dramatic gains.

The idea that differences in mental ability are due to environmental stimulation was indirectly supported by a study conducted by Nancy Bayley (1965) of the development of infants between the ages of one month and fifteen months. She found no significant differences in the mental and motor development between boys and girls, Negroes and whites, or children born of educated or uneducated parents. She did find that first-born children scored higher than later-born children, and accounted for that difference by the fact that first-borns are likely to experience a much more parental attention than later-borns. She also concluded that developmental status in the first year of life is unrelated to later mental and motor functioning, a conclusion that suggests that differences in intelligence which appear in childhood and later are influenced strongly by events that occur during the pre-school and school years.

What Intelligence Tests Measure. The studies that we reviewed in the preceding section suggest that intelligence tests are measuring something in addition to mental ability. Evidently, they are also indirect measures of developmental level, emotional adjustment, socioeconomic status, the amount of stimulation in the environment, interest in problem solving, and competitiveness. The question whether intelligence is compounded of all these variables or whether it is what is left after all these variables have been controlled or eliminated, is a controversial one in psychology. Actually, psychologists are not agreed among themselves as to "what intelligence really is," let alone what intelligence tests measure, although this lack of clear definition has not seriously hampered the use and development of such tests. However, one way of determining what intelligence tests measure is to find out what their scores correlate with. It is clear, for example, that the high correlations usually found between IQ and academic grades show that intelligence tests are measuring some quality or trait that might be described as "academic aptitude."

Intelligence-test scores are also positively correlated with other kinds of success, although the correlations are not as high as those obtained with school marks. Gordon Liddle (1958) found that fourth- and sixth-graders who scored in the top ten per cent on intelligence tests were also likely to be perceived as leaders by their classmates and to show more than the usual amount of artistic ability. They also tended to have better emotional adjustment. Students with high IQs in another study were found to score lower on test anxiety (Denny, Paterson, and Feldhusen, 1964). A survey of high

school boys who were outstanding in athletics, science, fine arts, leadership, or academic achievement showed that the only quality they had in common was their tendency to score high on intelligence tests (Clarke and Olson, 1965). One interesting study of the differences between high- and low-IQ children was conducted by Willavene Wolf and others (1965), who photographed the eye movements of fifth-grade children watching educational television. They found that children with higher IQs spent more time watching the areas of the screen that were pertinent to the general intent of the teaching unit, whereas children with lower IQs spent more time in watching distracting areas of the screen (for example, watching the instructor's face instead of his hands when he was demonstrating a technique). Low-IQ children also spent more time looking at the edge of the television screen or not watching the picture at all. Such differences suggest that children with higher IQs have a higher degree of interest in learning and are better able to focus their attention on material that is to be learned.

Whatever it is that intelligence tests measure, it seems to be positively correlated with success and good adjustment in a wide variety of fields. Perhaps "the tendency to behave competently and effectively" is a good rough-and-ready definition of "intelligence" as measured by such tests. This definition would actually not be far from the concept of intelligence as conceived by the layman.

The fact that intelligence tests are fairly good measures of what most people would recognize as intelligence does not mean that a single score, such as an IQ, can routinely be considered a definitive index to the competence of individual students. Although children who score high on such tests are more likely than other children to possess skills, insights, and attitudes that are superior to other children, not every single child with a high IQ has all these characteristics, nor does every child with a low IQ lack them. There is many a boy who is highly competent at repairing motors (mechanical intelligence) or in organizing class parties (social intelligence) who scores in the average ranges on standard intelligence tests. And countless teachers have wondered why the boy who has the highest IQ in his class has barely average or failing marks. The point is that a single test score or an IQ does not tell us everything about a student. Whatever test scores tell us must be considered together with other kinds of data if we are to gain any understanding of students and their behavior.

Are Intelligence Tests "Unfair" to Some Children? Conventional intelligence tests have been under attack by a number of behavioral scientists, notably Allison Davis of the University of Chicago, because they appear to be biased in favor of middle- and upper-class children. Davis (1951) has

taken the position that a middle-class child cannot help but do better than a lower-class child in tests that ask a child to define words like "symphony," a term that is likely to be unfamiliar to people from lower-class surroundings. The common finding that middle-class children score 20 or more IQ points higher than lower-class children was also criticized by Davis. He stated that if children from lower-class families were tested by an accepting, encouraging person and on "culture-fair" tests, they should do as well as children from other socioeconomic groups. However, a test constructed according to Davis's specifications by both Davis and Kenneth Eells provided no advantage for lower-class groups. One study, conducted by William L. Fowler (1957), of ten-year-old Negro and white children in Detroit and Hamtramck showed that middle-class children did better than lower-class children on the Davis-Eells test, just as they did better on more conventional measures of intelligence. In fact, the lower-class boys tended to do better on the conventional tests than they did on the Davis-Eells.

Reasons for the poor showing of lower-class children on the Davis-Eells test are not difficult to find. Middle-class children are more likely than lower-class children to possess attitudes that are favorable to school and to the kind of paper-and-pencil tasks that are assigned them by the teacher. Middle-class children are, furthermore, more favorably disposed toward becoming involved in the kind of competition that leads both to academic success and to top scores on intelligence tests. In other words, middle-class children are more favorably motivated than are lower-class children to do their best on classroom tasks of all sorts. It may be, as Davis says, that middle-class and lower-class children are not as far apart in their basic mental ability as intelligence test scores would suggest. Some support for this position is provided by research by Joseph H. Britton (1954) showing that children from the two social groups were approximately equal when tested by a *nonverbal* intelligence test. Cultural factors may interfere with test performance, too. When Robert R. Knapp (1960) administered the Cattell Culture Free Intelligence Test to Mexican and American adults, Americans scored higher, but when the two groups took the test without the usual time limits, Mexicans showed the greater improvement. But in a culture that is largely middle-class-oriented, in which the standards for success are largely determined by middle-class people and conditioned by middle-class values, it is to be expected that the kind of behavior that appears to be the most acceptable (and thus the most "intelligent") will be more characteristic of middle-class children than of children from other social classes. Competitive behavior is also more accepted by middle-class people, whereas it is frowned on by members of both the upper and the lower social classes.

If this is true, then we would also expect that middle-class children would outperform *upper-class*, as well as lower-class, children on intelligence tests. There is only a little research on this subject, but what we do have tends to confirm this hypothesis. Charles McArthur (1957) found some evidence to indicate that intelligence tests used in school favor middle-class more than upper-class students, and several studies, including one by Junius A. Davis (1956), show that graduates of public high schools (mostly middle-class) do better in Ivy League universities than do graduates of select private schools (largely upper-class). One explanation of the superior performance of public school graduates is provided by a study conducted by W. Cody Wilson (1959), who found that graduates of public high schools were more favorably oriented toward achievement and accomplishment than were graduates of private schools. Another study explains the difference in terms of the fact that private school graduates score lower in tests of scholastic aptitude (intelligence) (Finger and Schlessner, 1963).

Some psychologists also feel that intelligence-test results do not adequately reflect the degree of competence one can expect of highly creative students. This topic will be discussed at the end of the chapter, when we take up the problem of measuring and fostering creativity.

The Problem of Underachievers. Intelligence-test scores are useful primarily as the basis for predictions. A high IQ leads us to predict superior school work, and a low IQ, poor work. But what about the students for whom we are led to make false predictions? Students whose academic performance is strikingly lower than one would expect from intelligence-test scores are termed "underachievers." These students are a challenge to teachers, as well as to researchers, because their IQs suggest that they have the ability to do better in the classroom than their marks would indicate. Merville C. Shaw and Donald J. Brown (1957) present evidence to show that underachievers actually are successful in learning, because their level of achievement as measured by standardized tests is comparable to their IQ. However, they do receive lower grades, which suggests that they may have difficulty in completing the kinds of tasks that teachers set for them. Shaw and Brown found that bright students who are underachievers in college come from small towns and rural areas, are from larger families, have parents who do not have a college education, and carry less than the average load of academic work. Some clues to the reason for their lower grades are suggested by their scores on personality tests, which show them as being hostile and critical of others (Shaw and Grubb, 1958). Hugh V. Perkins (1965) compared bright achievers and underachievers in twenty-seven fifth-grade classrooms in upper-middle-class suburban communities in Maryland. The underachievers en-



"Do you enjoy being an under-achiever?"

Drawing by Whitney Darrow, Jr.; © 1961 The New Yorker Magazine, Inc.
(Reproduced by permission.)

The reasons why a student's performance does not match his ability are often baffling and beyond the limits of ordinary common sense.

gaged in more withdrawing (shy) behavior and were more inclined to spend class time working on something unrelated to the topic of the moment. The achievers engaged in more work-oriented social interaction with other class members, which suggests that they were more capable of learning from peers than were the underachievers.

Patterns of behavior and performance characteristic of underachievers appear to be related to parental attitudes. Another study by Shaw (1964) of

Educational Psychology in the Classroom

the kind of expectations parents of achieving or underachieving high school students have points to certain basic differences in child rearing that may in turn be related to their children's ability to achieve. As the data reported in Figures 14-4 and 14-5 suggest, parents of underachievers tend to stress goals that are unrelated to achievement and that do not promote social maturity and independent thinking. Parents of achievers are more likely to expect their children to be responsible, to have interests and hobbies so that they can amuse themselves, and to know how to make decisions. They also expect them to share adult interests at an earlier age. Parents of underachievers seem to have conflicting attitudes about their daughters' play: they evidently expect them to play around in the neighborhood without supervision and want them out from underfoot, but at the same time they are concerned lest they play with the wrong kind of children. Indeed, some of the values expressed by parents of underachieving children resemble those of lower-class parents that we reported in Chapter 4.

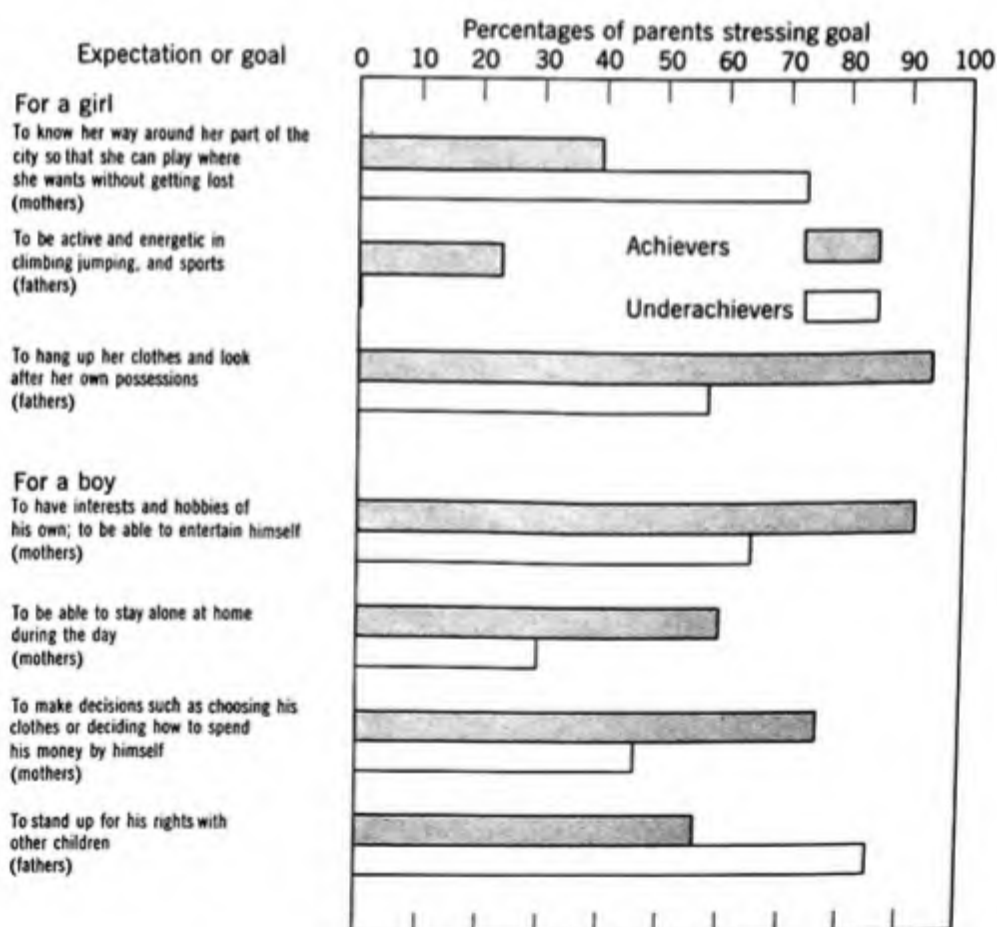


FIGURE 14-4. Differences in expectations or goals emphasized by mothers and fathers of achieving or underachieving high school students. (Shaw, 1964.)

Measuring Individual Differences

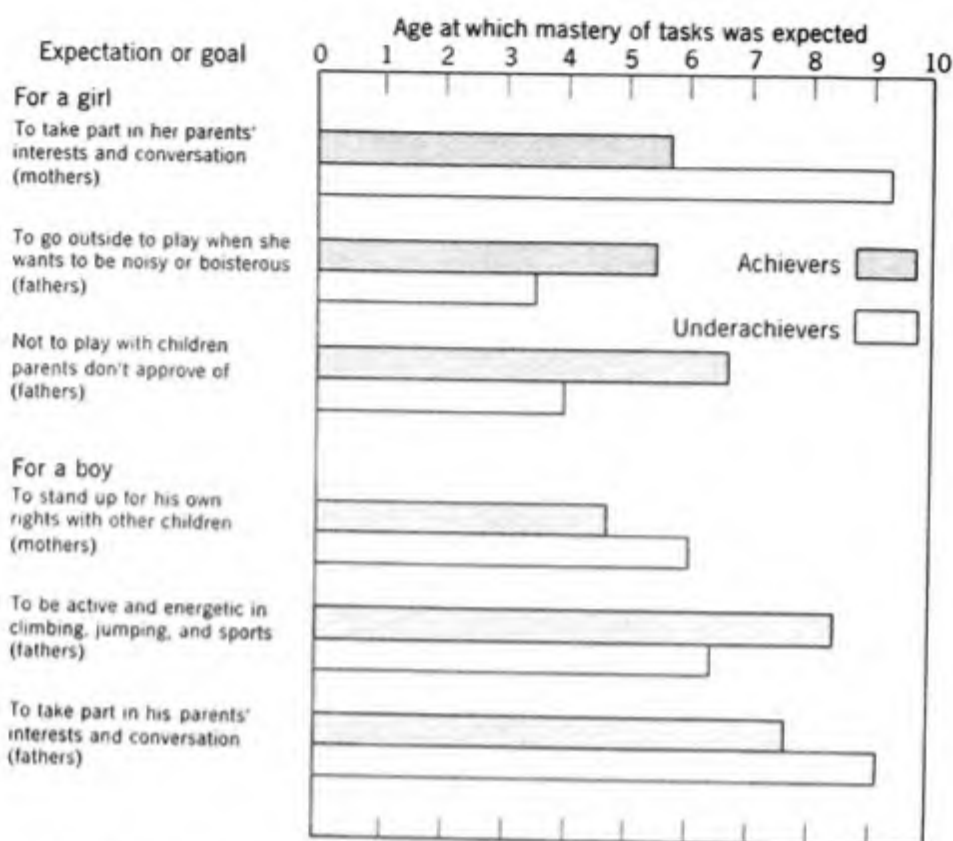


FIGURE 14-5. Differences in the age at which mothers and fathers of achieving or underachieving high school students expected children to master certain tasks or goals. (Shaw, 1964.)

Still other research shows that underachieving boys begin achieving below expectations in the first grade and continue throughout school, whereas girls who turn out to be underachievers actually receive higher grades than other bright girls during the first five years of school and do not become underachievers until the seventh grade, as shown in Figure 14-6 (Shaw and McCuen, 1960).

Although the research with underachievers raises questions about the validity of intelligence tests, at least with certain students, it does suggest how such tests may be used to identify children who need special help. If one of the tasks of the school is that of helping children to learn to work up to their best potential, a comparison of IQs and grade averages would enable teachers and guidance workers to identify those who may not be achieving because of problems of adjustment, motivation, or lack of clarity of goals. Such use of intelligence-test scores would seem to be in the best interests of the child.

David A. Kolb (1965) described an interesting study in which the academic progress of twenty underachieving boys who had gone through an

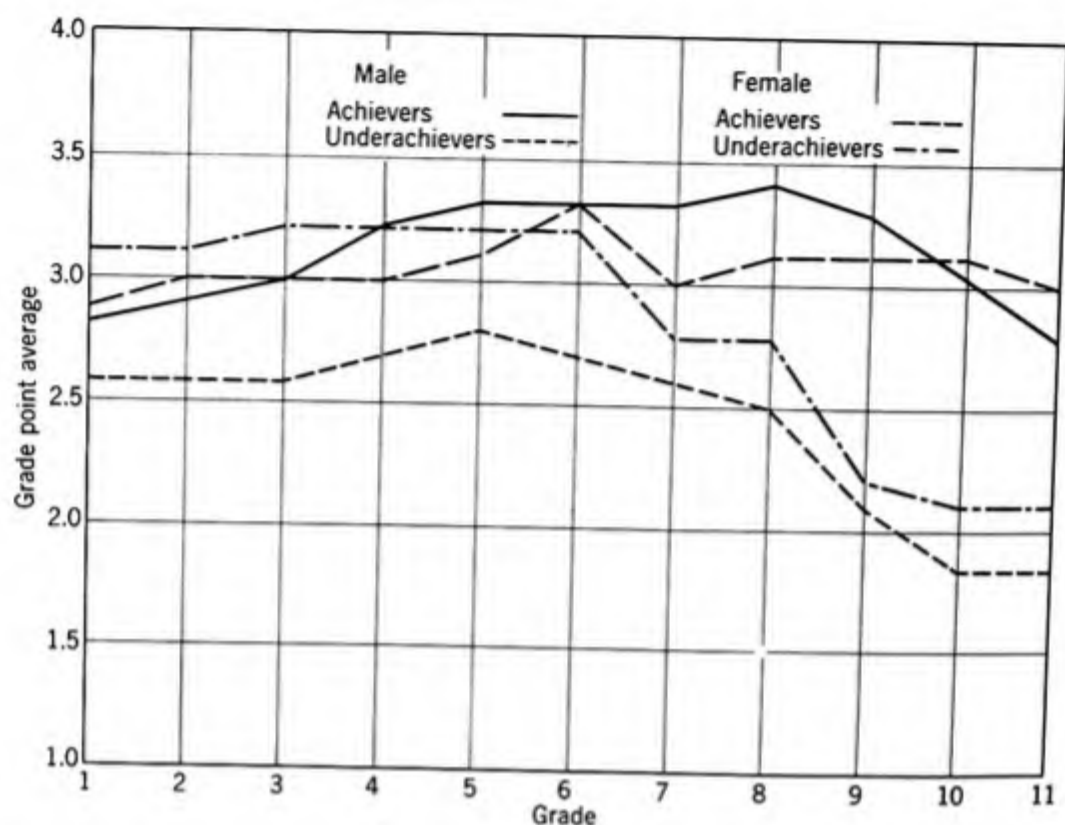


FIGURE 14-6. Comparison of the success in school of achieving and underachieving students with IQs over 110. (After Shaw and McCuen, 1960.)

experimental summer program designed to teach them the characteristics of a high-achieving person was compared with thirty-seven other underachievers who had taken a regular academic summer course. A follow-up six months after the end of the program revealed no significant differences between the two groups, but a second follow-up eighteen months later showed that the grade-point average of those who had participated in the experimental course increased significantly. Unfortunately, most of the increase took place in the grades of underachievers having higher socioeconomic status. Those with low socioeconomic status did no better than those who had taken the regular academic course. Increases in grades tended to be accompanied by increases in measures of need for achievement ($n\text{ Ach}$), a finding that serves to emphasize the importance of attitudes in school learning.

APTITUDE, INTEREST, AND PERSONALITY MEASUREMENT

Special Aptitude Tests. An intelligence test is sometimes referred to as an "aptitude test," because it is used to measure characteristics that can be used to predict future performance. Achievement tests presumably measure the amount of learning that has taken place. In effect, they look backward

of her true interests than her own feelings. Unfortunately, such misuses of tests are all too common.

George Miller's counselor handled his problem much more judiciously. He talked to George about the discrepancy between his stated interest in medicine and the results of the test (see Figure 14-7), but he did not want George to accept the results of the test as an infallible guide. He merely raised a question with respect to the goal George had chosen. When George brushed aside the test results and insisted on taking the science curriculum, his counselor permitted him to do so, with the understanding that he was to reconsider the decision each year. George made average grades in science the first year and perhaps would have continued if his counselor had not pointed out that *average* grades were not good enough for college entrance and might even keep him out of medical school. He suggested that George try some music and drama and keep one science course. George agreed and found, after a semester, that he liked drama much better than science, whereupon he changed his major to English.

Personality Questionnaires. Another type of measuring device that belongs in the field of the counselor's operations is the personality test. We say that it "belongs" in the counselor's area, because personality-test results need expert interpretation and because there is a tendency for school people to use them rather indiscriminately. The last two decades have seen a great surge of interest in personality tests. The *Sixth Mental Measurements Yearbook*, for example, lists more personality tests than any other type. Their reviews occupy 400 pages out of the 1200 devoted to tests of all kinds. Undoubtedly this interest in personality tests is a reflection of our increasing concern about mental health and emotional adjustment.

Most of the personality tests commonly used in schools are questionnaires designed to get children to reveal their personal problems, tensions, and anxieties. The more problems and anxieties a child reports, the poorer his adjustment score. One flaw in this method (and this is also a flaw in the methodology of the vocational-interest tests we mentioned) is that the individual is at liberty to "slant" his responses consciously or unconsciously—to answer any question the "right" way or the "wrong" way at will. Thus the overly conscientious but well-adjusted child may report a great many problems and receive a "poor" score, whereas the emotionally disturbed child who does not want teachers probing into his private life will admit to few problems and receive a "good" score. And the child who has many problems, but is unable to admit, even to himself, that he has them, will receive a "good" score because he has selected all the "right" answers. Such distortions of personality-test results are not unusual. Furthermore, different children react to the same items in different ways, and children with roughly similar problems may get quite different scores on the same test.

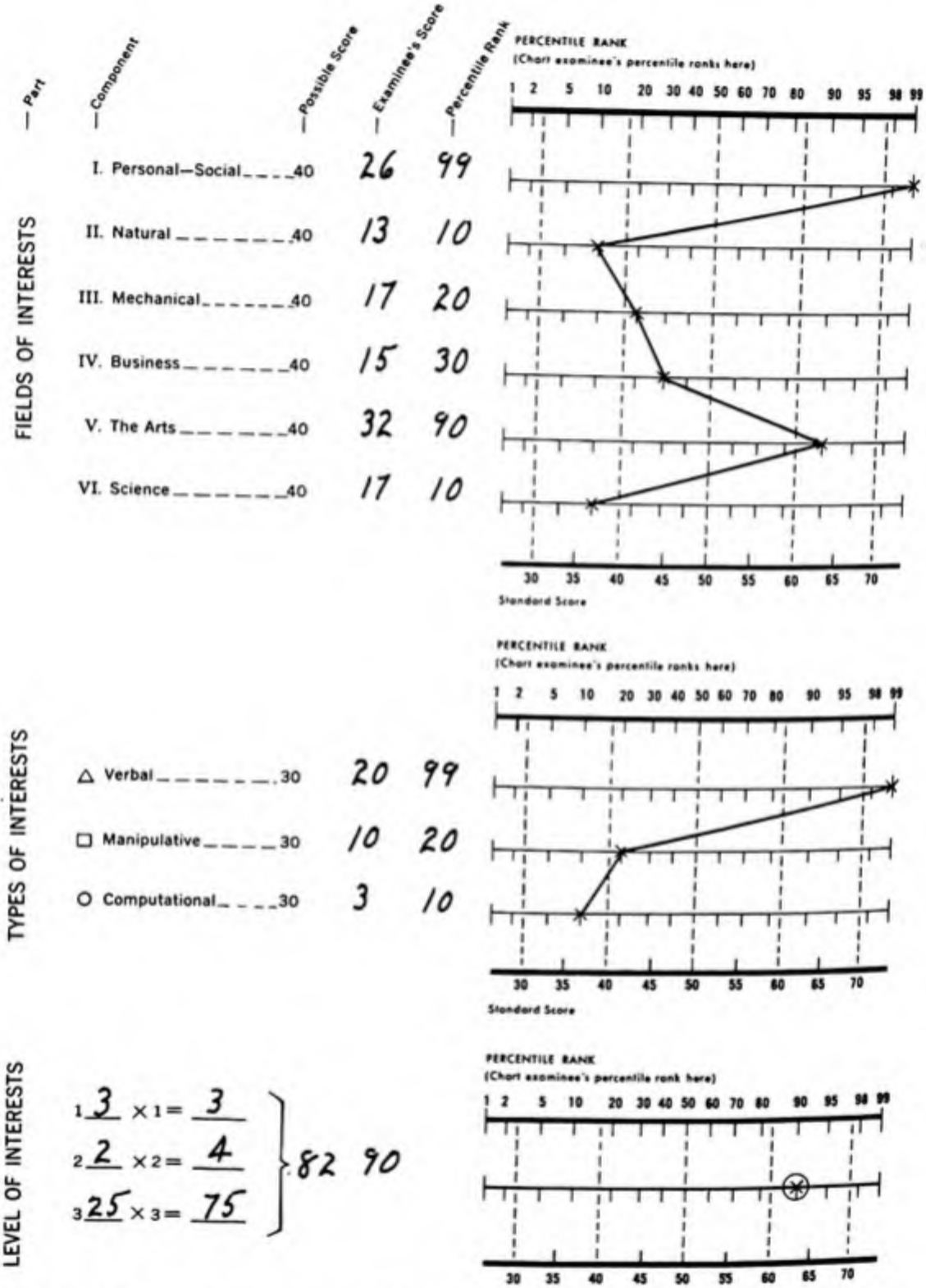


FIGURE 14-7. Sample profile of male high school student: Occupational Interest Inventory. (Lee and Thorpe, 1946.)

Personality tests are, in a way, shortcuts to be used in place of personal, diagnostic interviews. A teacher cannot sit down with each student in his class and spend an hour or two looking for problems. A personality test is helpful, then, as a quick way of locating problems that might be bothering children and interfering with their learning. It might also indicate which children should receive special psychological help. Such data are useful in schools where school psychologists or counselors are available for referral or as consultants or where teachers have sufficient time, training, and supervision to give children some of the special help they need. When personality tests are administered by teachers who lack adequate training or supervision, there is always a danger that the results may be misused or not used at all. It is important to keep in mind that the questions posed by a personality test are concerned with personal and rather sensitive areas of life. Hence if teachers go so far as to arouse the anxieties of children by giving them a test of this type, it would seem that they are under an obligation to make use of the data in some kind of positive and helpful way.

The main types of personality tests are self-rating questionnaires, problem checklists, and projective tests. The California Tests of Personality (Thorpe, Clark, and Tiegs, 1953) ask such questions as:

Do you feel like crying when you are hurt a little?

YES NO (Primary Form)

Can you often get boys and girls to do what you want them to?

YES NO (Elementary Form)

Do you keep on working even if the job is hard?

YES NO (Intermediate Form)

Is it hard for you to admit when you are wrong?

YES NO (Secondary Form)

Do you usually carry out your plans in spite of opposition?

YES NO (Adult Form)

The Mooney Problem Check List (Mooney and Gordon, 1950) includes such problems as the following:

Not interested in books (Junior High School Form)

Having dates (High School Form)

Too few dates (College Form)

Not finding a suitable life partner (Adult Form)

Projective Tests. Projective tests employ a totally different approach to the problem of investigating and appraising the emotional life of individuals. There are many types of projective tests, but they all involve presenting the individual with some kind of a stimulus (inkblots, incomplete sentences, pictures, and the like) in which there is some degree of vagueness or ambiguity. Inasmuch as the individual does not know what answer is expected of him, he is likely to respond in ways that are more or less revealing, rather than in accordance with what he thinks is the "right" answer. One of the chief difficulties with personality questionnaires, as we have indicated, is that students are aware which responses would be considered to be "good" or "poor," hence they may be led, consciously or unconsciously, to "fake" a "well-adjusted" or a "poorly adjusted" score.

Projective tests are generally used as part of a psychological interview designed to identify problems that may be troubling an individual who has been referred for psychotherapy. Generally speaking, they accomplish this task without upsetting him and thus without spoiling the relationship or "rapport" between him and the psychologist. Figure 14-8 consists of a picture included in the Picture Situations Index, a projective test designed to obtain information about punishment at home, a sensitive area of life for many



FIGURE 14-8. A card from a projective test consisting of a series of pictures designed to investigate perceptions, feelings, and attitudes of boys and their mothers with respect to punishment. (Morgan and Gaier, 1956.)

children. As the child is presented with each picture in the series, he is invited to tell what is happening in the picture, what the characters in it might say or do, and how they would feel (Morgan and Gaier, 1956). The use of such devices enables children to discuss their problems behind the facade of talking about the picture.

A test that is frequently used with children, and that resembles the Picture Situations Index, is the Symonds Picture Story Test (Bureau of Publications, Teachers College, Columbia University), a test that presents the child with a series of pictures, with the request that he tell a story about each one. The Rorschach or inkblot test (Psychological Corporation) requires the individual to say what he sees in a series of inkblots or what they remind him of. Some psychological workers like to use a "sentence-completion" type of test, whereby respondents are asked to finish sentences that start with such phrases as:

Other children

I think that my mother

Sometimes teachers

If my father

All of these methods can be useful techniques in the hands of skilled and trained psychological workers, but they are, generally speaking, inappropriate for use by teachers. For one thing, administration and interpretation of even one test may take many hours. Projective tests are primarily tools for the research worker or for the clinician, the person who is spending a great deal of time working with a few emotionally disturbed children who need intensive treatment.

Observational Techniques. This is not to say that teachers should not study the emotional life of their students. Actually there are two techniques that can be very useful in the hands of a teacher who wishes to gain a better understanding of some of the dynamics of classroom behavior. One method is sociometry, which we discussed in Chapter 5, and the other method is that of anecdotal records. Sociometric devices yield valuable data about the psychological forces at work within the classroom group, data that cannot be obtained any other way. Furthermore, sociometric data are very helpful to the teacher in his task as group builder, one of the several important roles he must play

The anecdotal record is basically a kind of diary of incidents jotted down soon after they occur. A single, isolated impression of student behavior, noted

in the midst of a busy day, does not reveal much about a student, but if the teacher jots down something about that same student every day or so for several weeks, he will begin to see some general patterns of personality emerging.

For instance, Miss Kellogg may note that Gordon went over to George and patted him on the shoulder after he had hit a home run at softball. Her immediate reaction may be one of pleasure: "It's nice to have the children appreciate each other." Or she may decide that Gordon is a rather friendly boy. But when this incident becomes one of a series of short observations about Gordon, she may notice that he is nice only to George and virtually ignores the other children in the class. Then it becomes apparent that this friendly pat on the shoulder was part of a very special relationship that exists between himself and George. Miss Kellogg's reaction might now be: "I didn't know that Gordon and George were such close pals. No wonder they put up such a fuss when I assigned them to different committees."

The point is that a series of observations on one student may reveal a pattern in his behavior. Keeping anecdotal records can help the teacher develop a frame of reference that may be quite different from the one he has previously used in reacting to the student.

One of the problems in using this technique is that of being completely objective. There is the danger that the teacher will write down his *interpretation* of an incident, instead of what actually occurred.

For example, Miss Kellogg might write: "When Sandra asked Gordon to help her with the Junior Red Cross parcel, he was uncooperative and nasty."

Whereas she should have written something like this: "Sandra was wrapping up a parcel for the Junior Red Cross. She needed to have someone put a finger on the knot she was tying. Gordon was standing nearby, talking to George. Sandra asked him to help her, and he said: 'Aw, ask your boy friend!' and turned back to talk to George. Sandra said nothing in reply but called to Josette, who helped her finish wrapping the package."

The first anecdote contains value judgments regarding Gordon's behavior. In some ways, it tells us as much about the teacher as it does about Gordon. For instance, it tells us that Miss Kellogg disapproves of Gordon. The second anecdote has more detail and takes longer to write, but it presents a much more complete picture. Read in connection with other anecdotes that Miss Kellogg has jotted down regarding Gordon, it suggests the hypothesis that he acted as he did partly because he felt that Sandra was interfering in his relationship with George.

Arthur W. Combs (1965) takes a somewhat different approach to anecd-

dotal records. He asks his student teachers not to make detailed, factual records when observing children, but instead suggests that they

. . . get the "feel" of what's going on, to see if they can get inside the skin of the person being observed, to understand how things look from his point of view. I ask them, "What do you suppose he is trying to do?" "How do you suppose he feels?" "How would you have to feel to behave like that?" "How does he see the other kids?" "What does he feel about the subject?"

Such recommendations are in keeping with Combs' contention that people behave in terms of how they perceive their environment and themselves. It is only when we understand these perceptions that we can understand their behavior.

There are other approaches, in addition to sociometry and anecdotal records, that perceptive teachers can use in developing an understanding of the emotional and motivational life of their pupils. Students often reveal helpful bits of information, wittingly or unwittingly, in their casual remarks to one another, in their written work, and in their conversations with teachers. There is no lack of vital psychological data in everyday classroom experiences. The problem is one of perceiving more sharply and objectively, and of organizing and understanding what we see and hear. Many schools employ specialists of various kinds who can be of considerable assistance in helping teachers acquire a better understanding of the psychological aspects of the behavior that they observe in the classroom. Some of the functions of these specialists are described in the chapters that follow.

Public Criticism of Personality Testing. During the past few years, there has appeared a small but vocal group of laymen who are upset by attempts of school personnel to test for, identify, or record data regarding personal problems of students. This group is convinced that personality tests are an invasion of family privacy, because such tests ask questions about child-parent relations, and that teachers and school psychologists are primarily interested in asking such questions because they have a busybody's curiosity about matters that do not concern them. There is also the natural fear on the part of some parents that they will be made to appear inferior or ridiculous when such data are recorded and discussed by school staff members. Their concern has been heightened, furthermore, by occasional instances when teachers have behaved in an unprofessional manner and have communicated confidential data to unauthorized persons.

The concern about personality tests has not been confined to those used in schools. Personnel specialists in industrial and governmental organizations have been criticized in the press for their use of tests, and a few best-selling

books have made capital of the fears and anxieties people have about "brain watchers." In fact, a Congressional hearing was held in June, 1965, to examine all sides of the question. Although the results of the hearing were inconclusive, the fact that they were held is an indication that many people are anxious and concerned.

In California, a seventy-seven-member citizen's advisory committee held fifty public meetings over a two-year period to explore the topic of the use of tests of all types—intelligence, achievement, and personality—in the public schools. Their recommendations were generally favorable to the use of tests, but three members issued a minority report in which they recommended that the Legislature withhold state funds from any school district administering personality tests. The minority report also called the tests "vicious" and referred to the "damaging information" that was being recorded in cumulative records maintained by schools (Mahler and Smallenburg, 1963).

Without trying to magnify the problem, it does appear that teachers using personality tests should exercise more than the usual amount of caution. Unless such tests are administered as part of a research study, their use is best confined to staff members, such as school psychologists and guidance counselors, who have had professional training in the use and interpretation of such measures.

MEASURING AND FOSTERING CREATIVITY

Creativity and Intelligence. Psychologists have, during the last decade, developed an intense interest in creativity as a topic for research. This interest has led to the development of theories about the nature of creativity, of questionnaires and other instruments to measure creativity, and of experimental techniques designed to encourage, foster, or stimulate creativity.

Much of this research has been initiated as a result of an address by J. P. Guilford (1959) delivered at Stanford University in 1959. In this address he differentiated between convergent and divergent thinking processes. Most education, he pointed out, is concerned with promoting convergent thinking, the kind of thinking in which students are encouraged to find the "right answers" to problems. Such a process assumes that there is a single right answer and that it exists somewhere, usually in the textbook or in the course of study. Divergent thinking, as the term implies, has to do with such thought processes as speculation, imagination, and invention, processes which stem from the assumption that there may be several good ways in which to solve a problem. Creativity is more likely to be associated with divergent than with convergent thinking.

Inasmuch as most class instruction, fact-oriented as it is, is concerned with convergent thinking, students do not have to think divergently to get top grades. Divergent thinking is usually regarded by teachers as irrelevant, time-wasting, or merely "wrong," and consequently is likely to go unrewarded. Most standardized, objective tests, including tests of intelligence, measure convergent thinking, which may be one of the reasons that they are correlated so highly with teachers' marks. The routine admonition "don't guess" is indicative of the bias against divergent thinking. Convergent-type thinkers refrain from guessing and are not inclined to answer a question if they do not know the answer.

This state of affairs has led many people to become concerned with teaching methods and measures that penalize (or at least do not reward) creativity and that may even place creative students at a disadvantage. The fact that they are at some disadvantage is shown by a study conducted by Jacob W. Getzels and Philip W. Jackson (1962) of the University of Chicago, who compared teachers' reactions to highly creative and highly intelligent high school students. Getzels and Jackson divided their subjects into two groups: a *high-creative* group, consisting of students who scored in the top 20 per cent of a test of divergent thinking, but who did not score in the top 20 per cent of a test of intelligence; and a *high-intelligent* group, who scored in the top 20 per cent of a test of intelligence, but not in the top 20 per cent of a test of divergent thinking. Both groups were equally superior on standardized tests of academic achievement, but teachers reported that they personally preferred the high-intelligent to the high-creative group. Some of the reasons why they expressed such a preference are suggested by a study by John L. Holland (1959), who found that teachers were better able to identify students showing leadership and high academic achievement than those showing a high degree of creativity. Indeed, many of the traits characterizing the highly creative student (nonconformity, unsociability, impulsiveness, introversion, and sensitivity) are not very middle-class and also characterize the very opposite of the kind of student teachers prefer. In another study of self-regarding attitudes associated with creativity, researchers found that more-creative students are more likely to describe themselves as "bitter," "irritable," "gloomy," and "sarcastic," whereas less-creative students were more likely to choose such adjectives as "peaceable," "contented," "conscientious," and "patient" (Lindgren and Lindgren, 1965a, b). It is thus hardly surprising that teachers prefer the less creative student: they probably find him more cooperative and easier to work with. X

A number of writers contend, however, that creative students should be encouraged and supported irrespective of whether they are nonconforming

and moody or not. In the first place, they say, teachers should not favor students merely because they are conformists, and, in the second place, schools should be encouraging and not discouraging creativity and creative students. The complicated problems posed by today's society call for *more*, not less, creative solutions, they say.

Part of the difficulty in resolving differences between those who favor "creativity" and those who favor "intelligence" lies in the fact that the differences between these two abilities may not be as great as Getzels and Jackson's research may imply. More recent research presents strong evidence that creativity and intelligence are highly correlated and may, in fact, be somewhat different dimensions of the same general ability. Theodore Lee Seitz (1964), for example, tested some three hundred eighth-graders and found a very high correlation (.56) between standard tests of intelligence and creative thinking ability as measured by six of Guilford's tests. J. P. Guilford and Ralph Hoepfner (1965) also obtained a significant correlation between a number of experimental tests of divergent thinking and a standard intelligence test, although the relationship (.32) was not as great as that found by Seitz. In fact, the usual finding is that the relationship between measures of creativity and intelligence is modest but is nevertheless statistically significant. Of particular importance is the tendency for persons with high IQs to show a great range of creativity, from high to low, whereas persons with low IQs generally show only low creativity scores. Thus a high IQ does not guarantee high creativity, but appears to make it more possible.

It also seems very likely that a good proportion of students who score high on intelligence tests would also score high on tests of creativity. Kaoru Yamamoto (1964) found that twenty-four out of fifty-four gifted students were high on both creativity and intelligence. Such students are "twice-talented" and do not present any special problem for the teacher, for they are flexible enough to solve problems by convergent or divergent thinking, whichever is more appropriate. The problem is more that of the high IQ student who has not developed skills in divergent thinking, and the highly creative student who might be ignored or suppressed because he lacks interest or ability in using convergent thinking. There is also the problem of encouraging twice-talented students to use more of their creative skills and do more divergent thinking.

Stimulating and Facilitating Creativity. One solution of these problems, as well as of the general problem of how to raise the level of creativity for all students, is that of providing more opportunities in the classroom for divergent thinking. In general, permissive methods such as free group discussion,

which we described in Chapter 12, are also more likely to encourage divergent thinking than are more structured approaches to teaching.

Robert L. Spaulding (1963) studied twenty-one fourth- and sixth-grade classrooms in ten different schools, recording teacher-pupil interaction. He found that there were two styles of teaching which tended to diminish flexibility and originality (both aspects of divergent thinking and creativity) on the part of the pupil: (1) formalized, highly structured situations in which teachers maintained control by shame, ridicule, or admonition, and (2) tendencies of teachers to respond to social-emotional qualities of students, rather than to their cognitive performance. Note that the latter type of classroom is characterized by permissiveness, but also by a *lack* of concern for achievement and performance. The point is: permissiveness is not enough. Teachers should also note that classmates of creative children may not be particularly tolerant of this divergent thinking. In fact, they may regard the creative child as "the one who has all the crazy ideas."

Some experimentation has taken place with a method known as brainstorming, a highly permissive, small-group discussion method that we described in Chapter 12. Sidney J. Parnes and Arnold Meadow (1960) have shown that courses making use of brainstorming methods can succeed in teaching divergent modes of thinking on the university level and that the learning persists for at least eight months after the end of the course. Other research using brief writing tasks shows that even short periods of brainstorming can produce significant changes in the level of creative functioning (Lindgren and Lindgren, 1965*a, b*).

The kinds of problems faced by teachers who wish to encourage creative thinking in their classes have been listed by Torrance (1964):

1. Students may propose unexpected problem solutions that may disconcert teachers who have been anticipating more prosaic ones.
2. Teachers may be strongly tempted to tell students solutions in order to "save time."
3. Students may see relationships and meanings that teachers and other experts in the subject-matter field might have overlooked.
4. Students may ask questions that teachers cannot answer.
5. Teachers may feel guilty about permitting or encouraging students to guess.
6. Time pressure and scheduling problems may sometimes make it difficult to allow or consider all the questions that students want to ask.
7. Quite realistically, teachers sometimes have to get students to conform in many ways in order to teach them how to "get along."

Another problem relates to the creativity of the teacher. It would appear that more creative teachers would be likely to foster creativity in their students

to a greater extent than would less creative teachers. For one thing, if creativity is to be fostered in students more than is done at present, this calls for methods that are more ingenious, inventive, and experimental than those that are currently being used. Less creative teachers are not likely to develop such methods and may even resist using them. For another, a teacher's drive to be creative himself may lead him to encourage creativity in students. Torrance (1964) found a relationship between teacher creativity and student creativity. Students of teachers scoring above the median in a test of creative motivation or intellectual curiosity showed significant growth in creative writing ability over a three-month period, whereas students of teachers scoring below the median made no gains. Probably more teachers would be creative if they received encouragement and support from administrators. Unfortunately, such support is often lacking. One survey of school principals' ratings of teacher effectiveness showed that teachers who showed more ingenuity (one aspect of creativeness or divergent thinking) tended to get lower ratings (Jex, 1963). Everyone seems to be in favor of creativity, but not of creative people.

SUMMARY

The first intelligence tests were developed by Binet and Simon in France and by Terman in America. The Binet-Simon Scale and the Stanford-Binet are "individual tests"—that is, they are administered in the setting of a personal interview. Their results are expressed in terms of the intelligence quotient or IQ. The IQ indicates the extent to which a child is advanced or retarded intellectually as compared to other children his age. The Wechsler Intelligence Scales, which have both adult and children's forms, have also been widely used.

Group intelligence tests made their appearance on a large scale during World War I in the form of the Army Alpha and the Army Beta Tests. Most of the intelligence tests that are used in schools today are, in effect, variations and improvements on these two models. Although the validity and reliability of intelligence tests generally have a high statistical rating, there is actually considerable variation in the IQs of individual children over a period of time. Some of this variation is related to the socioeconomic status of children's families and to emotional problems of adjustment.

The question: "What do intelligence tests measure?" is not one that can be answered easily. There is a fairly close relationship between the scores made on intelligence tests and grades received in school subjects, a relationship that indicates that intelligence tests measure some phases of academic aptitude.

Success on intelligence tests also appears to be related to leadership and artistic ability.

Some writers have questioned whether intelligence tests are "fair" to students coming from lower socioeconomic surroundings. However, even when special "culture-fair" tests are administered, lower-class children continue to score lower than middle-class students. Some of this disparity may be due to the different attitudes lower-class and middle-class students have regarding the value of school success. There are some indications that these attitudes enable middle-class students to score higher than upper-class students.

Students whose school marks are lower than one would expect from their IQs are termed "underachievers." This behavioral tendency seems to be associated with high levels of hostility, being critical of others, lower expectations for achievement on the part of parents, and rural or small town origins.

Aptitude tests, such as intelligence scales, look forward, in the sense that their scores are used to predict future performance, whereas achievement tests look backward, in the sense that they are used to appraise the learning that has taken place. Special aptitude tests, covering such varied fields as reading readiness, mechanical aptitude, and musical aptitude, are also commonly used as aids in vocational and educational counseling and in selecting students for various kinds of specialized courses. Vocational-interest tests are helpful when students are faced with the need of making plans for the future. Such tests should not be used to make plans on behalf of students but rather to *help* them gain a better understanding of themselves, preparatory to making decisions.

Personality questionnaires may be of some help in understanding the problems of emotional and social adjustment that children face. However, they should not be used unless the teacher has sufficient time and training to make effective use of the results. Most personality questionnaires used in schools are of somewhat doubtful validity and must be used with caution. Some of the disadvantages of questionnaires can be overcome by using projective tests, but few teachers, if any, have either the specialized training or the many hours of time required to administer and interpret even a few tests of this type. In general, the best methods available to the teacher who wishes to study the personal and social adjustment of his students are the anecdotal record and the sociogram. Personality tests have been criticized by lay groups, who consider them to be an invasion of privacy—an additional reason for school people to use them with the utmost caution.

Divergent thinking, which includes the use of imagination, invention, and guessing, is considered to be more characteristic of creativity than is conver-

gent thinking or the kind of thinking that involves the identification of right or correct answers. Convergent thinking is involved in the usual types of intelligence tests and in most classroom learning. Students who are more creative seem to be more nonconforming and hostile than less creative students; hence teachers tend to prefer the latter to the former. Creativity may, however, be merely one dimension of general intelligence. Some teaching methods have been found to stimulate creative and divergent thinking, but teachers themselves need to become interested in creativity in order to apply them.

SUGGESTED PROBLEMS

1. Purchase, with the assistance of the instructor and the college bookstore, one or two specimen sets of some of the tests mentioned in this chapter as being appropriate for elementary or secondary schools. Administer them to yourself (and to another person, if possible), observing all time limits and directions contained in the manual. Score them and compute the norms as indicated. Evaluate your experience in terms of the following suggested points. To what extent does each test appear to meet the need for which it was intended? What evidence does the manual give regarding its reliability and validity? If you were giving the test to a classroom group, what problems would you anticipate and how do you think you would solve them? Discuss what seem to you to be the strengths and weaknesses of the test. What do the critics in O. K. Buros' *Mental Measurements Yearbook* say about the test?

2. It is said that when L. M. Terman was looking for gifted children to serve as candidates for his monumental *Genetic Study of Genius*, he found that he could not depend on the judgments of teachers, for very few of the students they nominated had IQs that were high enough. He found that the most efficient way of locating children with high IQs was to give his test to the youngest children in each class. Why do you suppose teachers did so poorly at selecting the most intelligent children in their classes? Why did Terman's method meet with better success?

3. Psychologists and educators are generally not in favor of communicating IQs either to children or to parents. What are some of the probable reasons why they oppose this practice? What would some of the arguments be that favor this practice? Assuming that you had decided not to give out IQs, how would you handle the problem of a parent who comes to you wanting to know his child's IQ? How would you handle the problem of a high school student who wants to become a lawyer but who has an IQ of 100 (average for high school, but below par for university)?

4. What could be done to encourage creativity among students in the subject or grade level in which you plan to teach? What kind of problems would more creative students pose for you? How should teachers deal with such problems?

SUGGESTED READINGS

- Buros, O. K., ed., *Sixth mental measurements yearbook*. Highland Park, N.J.: Gryphon Press, 1965. An enormous but invaluable compendium of reviews and other useful information on all available standardized tests.
- Cronbach, L. J., *Essentials of psychological testing*, 2nd ed. New York: Harper, 1960. A comprehensive, readable text.
- De Cecco, J. P., ed., *Human learning in the school*. New York: Holt, Rinehart, and Winston, 1963. See sections on intelligence and individual differences.
- Freeman, F. N., *Theory and practice of psychological testing*, 3rd ed. New York: Holt, Rinehart, and Winston, 1962. Particularly good for its discussion of intelligence and intelligence testing.
- Getzels, J. W., and Jackson, P. W., *Creativity and intelligence*. New York: Wiley, 1962. Report of research done with high-creative and high-intelligent students in a Chicago secondary school.
- Lindgren, H. C., Byrne, D., and Petrinovich, L., *Psychology: an introduction to a behavioral science*, 2nd ed. New York: Wiley, 1966. See the chapter on intelligence and creativity.
- Torrance, E. P., *Creativity*. Washington: National Education Association, 1963. Pamphlet No. 28 from the series, "What research says to the teacher," issued jointly by the Department of Classroom Teachers and the American Educational Research Association, both departments of the NEA.

15 Learners Who Need Special Attention



Audio-Visual Services, Alameda County Schools

Adapting Educational Practices to the Needs of Learners. Until recent years the prevailing philosophy in education was somewhat as follows: schools are the molders of children; therefore it is the responsibility of children to adapt themselves to the school. Education was thought of as something fixed and well defined. There was a body of information and skills that had to be learned, and children were considered to be educated to the extent that they could learn it. In effect, if the child who was to be educated was unwilling or unable to adapt himself to the molding influence of the school, he was uneducable.

Probably most teachers at times wish for the days when students who were unwilling or unable to learn could be dropped from school without further consideration. Such feelings are likely to be aggravated when students show lack of appreciation for the time, trouble, and expense that has gone into the development of the educational program, or when the best efforts of teachers to help students meet with repeated failure and frustration. Yet although teachers may occasionally long to be delivered of this burden of responsibility, they know that such thoughts are unrealistic and perhaps unworthy; they are not in keeping with the philosophy of education that we have been developing along with our ideas of political democracy—the philosophy that everyone has a right to the benefits of free public education. We have come to believe that education is a necessity in a democracy, that the whole structure of our national culture rests on an educated population. The laws that require children and youth to attend school are but one expression of these concepts.

The people of many states and communities in the United States have reached a point in their thinking about education where they are saying that the schools should teach *all* children, not just those who are interested or able to benefit from the standard curriculum or who can be taught without special facilities. Together with the development of this philosophy has come the idea

that all students cannot be expected to learn the same things in the same ways. This trend appears to be psychologically sound. Students *are* bound to learn different things and in different ways, even when they are in the same classroom and work under the direction of the same teacher. Because of the differences in their personalities, background, abilities, and needs, each will learn and retain what meets his needs and is best related to his experience. Just as both the lay public and the teaching profession are coming to understand the *individuality* of education, so are they also beginning to accept education as a *process* through which each child is helped to develop his potentialities and abilities to the greatest degree, with due regard both for his strengths and for his limitations.

There is, unfortunately, a large gap between good intentions and practice. Even though we know that patterns and rates of learning are highly individual, we still conduct much of the educational program as though students were standardized. Patrick Suppes (1964), of the Institute for Mathematical Studies in the Social Sciences, made this point when he told a convention of the American Educational Research Association that the fact that students differ widely in rates of learning was the most *unaccepted* principle of learning in the day-to-day practice of classroom teaching. Even children who have been preselected on the basis of high IQ show great differences in learning rate. Figure 15-1 shows the difference in progress in arithmetic between the

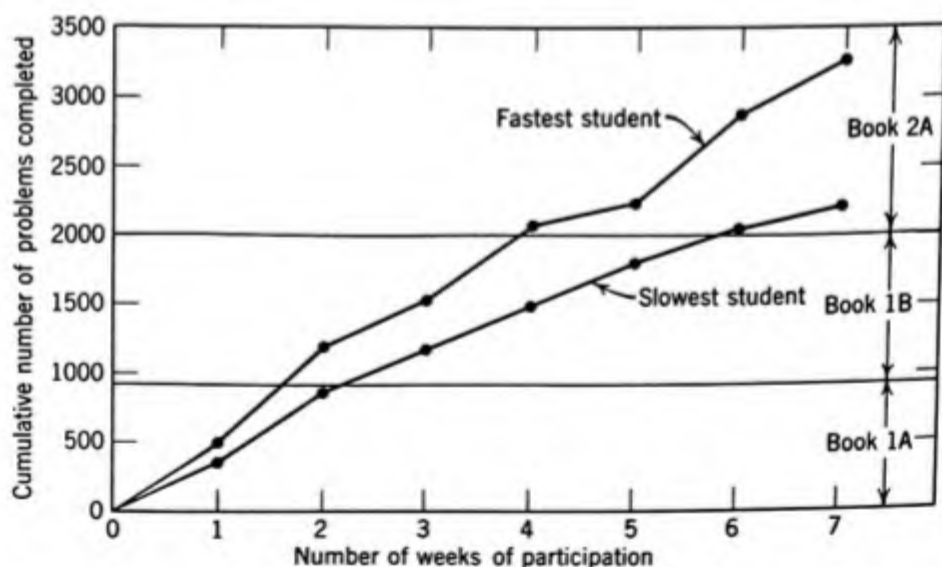


FIGURE 15-1. Number of mathematical problems completed at the end of each of seven consecutive weeks by the fastest and the slowest student in a gifted first-grade class of 40 students. (Suppes, 1964.)

slowest and the fastest student in a class of forty gifted first-graders whose IQs ranged from 122 to 166 and whose mean IQ was 137. By the end of the seventh week, the class had learned the concepts usually taught in first-grade arithmetic and were well into second-grade work. The slowest student in the group had completed approximately 2200 problems, but the fastest student had completed approximately 3400, or 50 per cent more. In another experimental program, Suppes introduced a special reading program to thirty-eight unselected kindergarteners. The fastest child needed only 196 learning trials to complete the program, whereas the slowest child needed 2506. Suppes' conclusion after these and other studies is that "by far the greatest improvement in subject-matter learning will result from an almost single-minded concentration on individual differences."

Suppes' research and comments point up the need to individualize instruction for all children in the classroom, a need that cannot be met under present conditions, partly because we tend to overlook individual differences in learning, but also because the limitations in personnel, facilities, and funds commit us to a program of mass education, with all its shortcomings.

We have, however, made some progress in providing more highly individualized education to students who apparently need this type of attention the most, and particularly to those children who have for one reason or another been unable to participate in the regular school program.

Special Education for Exceptional Children. What we are referring to is a new sense of responsibility that has come to the schools and the communities that support them, a belief that certain children should not be excluded from participation in normal educational experiences merely because they are unable to learn without special help. Both educators and laymen are beginning to say that children are entitled to an education even though they learn more slowly or with greater difficulty and even though such special education takes more teaching personnel and is more costly.

Children who are in need of such specialized help are the "exceptional children"—youngsters who require special attention because they are physically or emotionally handicapped, mentally retarded, or intellectually gifted. It is difficult to determine how many exceptional children there are; even experts are not agreed on what the exact criteria should be for determining who should have special help and who should be handled in the average classroom. Some schools may find, for example, that they can take care of the needs of a child who is subject to occasional epileptic fits without undue readjustment of classroom routine, whereas other schools may feel that such a child needs special supervision or even special classes. One estimate made by

Educational Psychology in the Classroom

the U.S. Office of Education (1964) placed the proportion of exceptional children at 10.5 per cent of the school-age population, or about one child in ten (see Table 15-1).

The special educational attention received by children in the various categories listed in Table 15-1 varies widely. One tendency has been to care for children with *severe* physical handicaps—blind and partially seeing, deaf and hard-of-hearing, cerebral-palsied, and children with rheumatic fever—in residential schools where trained personnel can give them the special education and medical attention they need. However, a countertrend is to have children live at home, where they can receive the psychological benefits of living with their family group, in which event they attend special schools or special classes in their community. The latter solution is of course feasible only if the disability is not so severe that it constitutes an undue burden on the family, and the success of the educational program for such a child depends on the exist-



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Even temporary physical disabilities call for special educational help. This teacher works with students confined to their homes because of illness or other forms of disability.

Learners Who Need Special Attention

TABLE 15-1. Number and Percentage of Handicapped Children in the United States Needing Special Education in 1963 (U.S. Office of Education, 1964)

Categories	Percentage *	Estimated Number
Blind	0.033	16,192
Partially seeing	0.06	29,441
Deaf	0.075	36,801
Hard-of-hearing	0.5	245,340
Speech-impaired	3.5	1,717,380
Crippled	1.0	490,680
Special health problems	1.0	490,680
Emotionally disturbed or socially maladjusted	2.0	981,360
Mentally retarded	2.3	1,128,564
	10.5 †	5,136,438 †

* Figured on the basis of 49,068,000 children of school age in 1963.

† If gifted children are included, as is often done, the percentage is increased by another 2.3 per cent to 12.8, and the total number is increased by 1,128,564 to 6,165,002.

ence of special schools and classes, as well as on the cooperation between the parents and the school.

The Content of Special Education. The problem of what to teach in special schools and classes is a complex one. The first and obvious requirement is that the child be helped to function as independently and as normally as possible. This means that children with cerebral palsy must be helped to learn to dress themselves; blind children must be taught how to move about and work in the company of others without injuring themselves; and children who are deaf must be taught how to read lips. Helping children to function independently may not be easy. Some children who have handicaps find it difficult to stop being dependent; very often they have led lives that were far more sheltered than was necessary and they have come to believe that they are incapable of doing things for themselves. In effect, they have come to "overaccept" and to exaggerate the severity of their disability. Other children resent their disability and are inclined to bear a grudge against the world. They express their hostility by resisting efforts to help or teach them. Very often, too, the attitude of adults interferes with the education of children with handicaps. A common attitude toward the handicapped individual tends to be one of mixed pity and shame, of overprotection and rejection. It is hard for us to accept him as an individual when we are fascinated or repelled by his handicap. Indeed, one of the chief arguments in favor of including handicapped children in "normal" classrooms is that it is as necessary for "normal"

children to learn to live with the handicapped child and accept him as one of them as it is for the handicapped child to learn to live with so-called "normals."

Some of the attitudes and problems that keep handicapped children dependent and that interfere with their learning are illustrated by this brief case history:

Monty was a very pleasant and agreeable ten-year-old boy who had been crippled by polio at the age of 3. He was confined to a wheel chair a great deal of the time because of residual leg weakness. In spite of this handicap, he was a charming, outgoing child who made friends easily, particularly with adults. However, he was evasive and stubborn when it came to carrying out any kind of responsibility, such as school work. He had been so protected and catered to because of his handicap that he had never been forced to make an effort on his own part to learn, to take exercises, and to follow regular routines at home, at school, and in the hospital. As a result, he became a problem to nurses and even to other patients in the hospital. On the one hand he would bring out their interest in him by his charming, appealing ways, but on the other hand, when it was time for him to do his school work or when he was asked to conform to hospital routines and regulations, he resisted. During his frequent hospitalizations, he stayed up until late hours every night, talking to any adult who was interested, watching television, and cruising about in his wheel chair. Any attempt to pin him down to a schedule, to get him to complete his school work, or to do his exercises, Monty met with stubborn resistance and resentment. (Phillips, Wiener, and Haring, 1960.)

Atypical and Typical Children. Sometimes children with special educational needs are called "atypical." However, the use of such a label implies that there are "typical" children. Actually, the "typical" child does not exist. Every child has his individual problems and needs. Indeed, every child is in some degree "handicapped" or "atypical," in the sense that there are some things that he cannot do well. Frances is one of the top students in her class. She is well liked by both adults and age-mates. But she must wear glasses because her right eye tests 20/60 on the Snellen Chart. Jim appears to be a perfect physical specimen; he is skillful on the playground and does better-than-average work in the classroom. However, Jim's great sorrow is that he has no talent or ear for music. He comes from a musical family and feels "left out" of many of their activities.

Exceptional children have handicaps and problems, just as Frances and Jim do, but their handicaps or problems are of such a nature that they need specialized help with some of their learning activities. Frances and Jim need specialized help for various problems from time to time, too, but they need it less often and less consistently than do children who are candidates for

"special education." Unless exceptional children get the help they need, they are likely to become discouraged and disheartened. What happens so often is that instead of getting the help they need, they are labeled and categorized:

"You can't do much with Mike—he's hard of hearing."

"Frank's a pretty good kid and I like him. But since he's taken to running with his brother's gang, there isn't much the school can do. We can send the truant officer after him to drag him back, but he'll just play hookey the next day and the day after that."

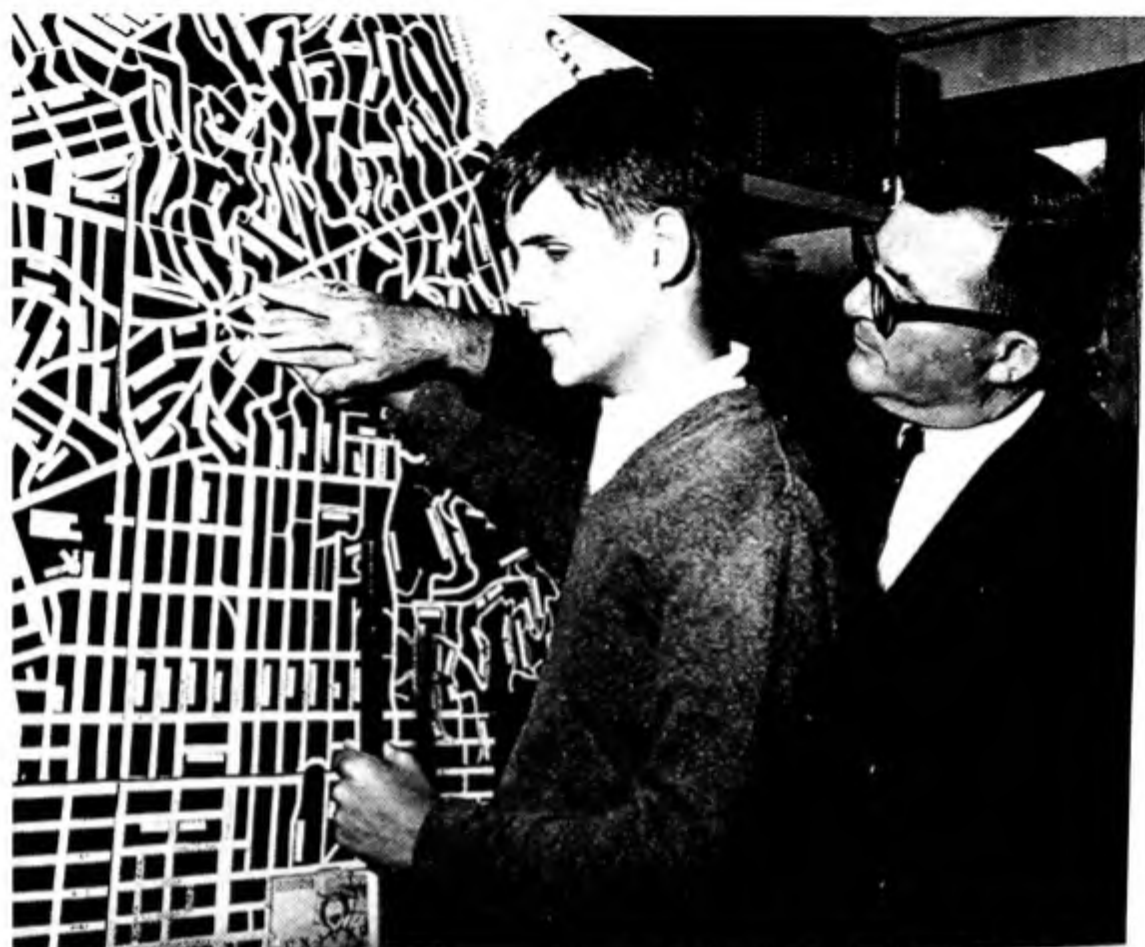
"Yes, Esther's quiet and she never bothers anyone. But she can't participate in the committee work we do in this class because she can barely read. Her IQ is somewhere around 70. There doesn't seem to be much to do but just let her alone."

It is because of attitudes like these that Rudolf Dreikurs (1952*b*) objects to the classification of children according to disabilities:

Unfortunately, being different implies in our culture not merely a difference in individual characteristics, but also a difference in social status. In the competitive atmosphere of our times, the yardstick of superiority or inferiority is applied to any outstanding difference. Furthermore, any deviation from normalcy, particularly if it is based on a deficiency, evokes unfavorable reactions. For this reason, any classification of children based on a comparison with others, is damaging. Whatever handicap the child may experience through his minus or plus deviation from others is accentuated by being placed in a special category.

Actually, each child has the right to be understood as he is and not to be compared with any other. Fundamentally, each is a human being and has to be respected in his own individuality, appreciated for what he is, and exposed to such treatment as he individually needs. Even the so-called normal children are by no means alike; they too require the same individual understanding and treatment. Classifying people and putting them into categories implies by necessity the setting up of a hierarchy, the use of a frame of reference which establishes superiority and inferiority, and in the end deprives each individual of his secure place in the group. For this reason, any classification must be considered artificial and damaging. The assumption, and even more the accentuation of inferiority and superiority, creates new difficulties and disturbs the social relationship of the child. Social living in a democracy presupposes a social equilibrium based on fundamental social human equality. Without feeling equal to others, the child cannot become a part of the group. It is equally detrimental to the social adjustment of a child to feel inferior or superior to the others. Far from discouraging such comparative attitudes, the classification of being exceptional enhances such mistaken attitudes in the child.

One condition that aggravates the feeling of inferiority that is so common among children classified as "exceptional" is the theme of failure that appears



Audio-Visual Services, Alameda County Schools

This blind student is getting an idea of the location of streets in the city before venturing out on his own. The philosophy of special education today is that of giving students maximum opportunity to learn how to participate in everyday life.

to run through the lives of many of them. As we have pointed out previously, we should not overprotect children against the experience of failure, because children need to have the experience of making some mistakes as a necessary part of the normal process of learning. Making mistakes is an inevitable part of everyday living; the important thing is to learn how to avoid them and how to correct them once they are made. Too much failure, however, can lead only to discouragement, and the handicapped student has more than enough opportunities to experience both failure and discouragement. Overfamiliarity with failure and discouragement inevitably leads to learning problems.

The problem of failure and discouragement is accentuated by the attitudes we tend to have toward handicapped children. We are inclined to be "underexpecting" and "overprotecting" with students who are crippled or who have

visual disabilities, but we are also inclined to be "overexpecting" and even "rejecting" with slow learners, with students who have social or emotional maladjustments, and even, at times, with the hard of hearing. Theta H. Wolf (1938) studied the effect of praise and competition on the persistence of kindergarten children. She came to the conclusion that a child's ability to persist was related to the degree of competence adults expected of him. The inability or refusal of some children to persist appeared to be caused by adults' tendencies to expect too much or too little of them. Evidently, either type of demand discourages a child and leads him to expect failure of himself.

Teachers and parents sometimes raise the question of how much of the regular school curriculum should be taught to the exceptional child. If intelligence or academic ability is within normal limits, the standard curriculum should not constitute any more of a problem than it does with any other student. This is particularly true of the lower grades, where a major degree of attention is paid to the learning of basic skills. Adjustments may have to be made with regard to physical education, field trips, or other activities that conflict with the limitations of the handicapped student, but they should not interfere with the normal progress of learning. At the same time we should recognize that handicapped children are inclined to have more than their share of emotional problems, which, in turn may interfere with learning. David H. Morgan (1944) did a survey of adolescents attending a school for the blind and found that the degree of personal and social maladjustment was much higher than would be expected from adolescents in a regular school. The longer the child had had the handicap, the more emotional problems he was likely to experience. The brighter the child, however, the fewer problems he tended to have.

Curricular problems tend to become more complex for exceptional children when they enter secondary school, because decisions must be made as to whether a student should receive special vocational training to prepare him for immediate employment on graduation or whether he should take the standard college-preparatory curriculum. One might argue that what he needs most are the skills necessary for self-support, but to prevent his taking a college-preparatory course merely because of his handicap would be a form of discrimination. This is a problem that can become especially difficult when the student's IQ is marginal as far as the prediction of college success is concerned—say, in the 100 to 110 range.

The Mentally Retarded Child. If, however, a student does not have the mental ability to progress at the normal rate and if it is so limited that he has difficulty in learning even the most basic concepts and skills, the problem of the school becomes even more complex. It may become necessary, for

instance, to place the child in a separate class taught by a specially trained teacher. Some schools attempt to deal with the problem by teaching the standard curriculum but teaching it more slowly and with much repetition until such time as the child has attained the legal age for leaving school. Other schools have revised the standard curriculum or have developed new ones better fitted to the needs and aptitudes of mentally retarded students. For example, they may sharply reduce the amount of time spent on the geography of the United States and spend much more time on the geography of the locality, feeling that a mentally retarded individual will have a much greater need to read the street map of his home town than he will to locate the capitals of distant states.

Again, a strong vocational emphasis is likely to appear in the revised curricula prepared for mentally retarded students. Here there is no conflict with respect to college-preparatory curricula, since they are obviously inappropriate, although the question might be raised whether courses in "human relations" or "effective living" should not be included.

One committee of secondary school administrators studied the problems of the mentally retarded or the "educationally neglected," as they chose to call them. Their recommendations are listed below, somewhat paraphrased:

1. Teachers need to emphasize the concrete and the specific with regard to both problems and materials.
2. Instruction should be directed toward satisfying those needs that are more immediate and more easily recognized and identified.
3. Mentally retarded children need more of the teacher's time and attention because of their greater needs for guidance.
4. Instruction should be less dependent on conventional printed materials.
5. Out-of-school resources, like the field trip, should be used more frequently.
6. There is a need for greater utilization of audio-visual aids.
7. Learning units should be organized around life problems more than around academic subjects. (Dodds, 1939.)

The problem of defining mental deficiency is one that is much more complex than it appears at first glance. One might think that it is merely a matter of giving children intelligence tests and assigning the label of "mentally retarded" to those who fall below a certain level—say, an IQ of 70. Other factors must be taken into consideration, however: emotional problems, cultural deprivation, possibility of bilingual background, and the like. Actually, most children who are originally classified as mentally retarded eventually make a reasonably good adjustment as adults. Don C. Charles (1953) did a study of the careers of twenty-four adults who had been

classified as mentally deficient when they were children. Although their average IQ in 1935 was 58, it was 72 in 1950. All individuals gained in IQ except for one who attained 68 on both testings. Most of the group made an adequate or more-than-adequate adjustment to the demands of adult life and only a few had become institutionalized. The social stimulation that results from everyday living may be one explanation of the increased competence of this group. Guinevere S. Chambers and R. N. Zabarenko (1956) conducted an experiment directed at trying to increase the IQs of a number of inmates of a state school for the mentally deficient by the administration of glutamic acid. Inasmuch as all groups in the experiment, including those who did not receive the drug, showed an increase in IQ, the increase was attributable to the social stimulation incident to being subjects of a research study. A group of eight small boys who had received the highest degree of attention showed the largest gain in IQ. This study has certain obvious implications with respect to the amount of attention that mentally retarded children should receive in the schools. Unfortunately, the kind of attention they receive from other children is likely to be negative. Clarence Johnson and Joseph R. Ferreira (1958) interviewed 149 boys and 50 girls between the ages of six and sixteen who attended special classes for the mentally retarded. Forty-one per cent of the group said that other children had called them such names as "dummy," "crazy," "nutty," and "dumbbell."

Some of the ways in which schools and other community agencies can work together to help severely retarded children are suggested by this brief case report of a nine-year-old, brain-damaged boy in the third grade:

Joe was a source of disturbance from the very beginning. He had a constant need to move around, and whistled, sang, or made nonsense sounds. He would strike at and hurt other children without apparent reason. His desk was always very orderly, and when he attempted work it was neat. Making an error upset him so much that he would destroy the paper rather than complete it. The teacher found that she could not give him the time and attention he needed and noted, furthermore, that his behavior disturbed the other students. However, when his parents took him to the family doctor, the only report they could get was that the boy was hyperactive.

When Joe entered the second grade, the school advised the family to refer him to a special diagnostic center, where his case was diagnosed as neurological impairment with suspected aphasia (speech difficulty due to brain damage). A child welfare agency then included Joe's mother in a counseling program with a group of mothers of brain-damaged children. This enabled the family to accept Joe's limitations and to learn new ways of managing him. The family doctor prescribed medication that helped in controlling impulsive behavior. As a result of the diag-

nosis of aphasia, the school put Joe in its special program for speech and hearing handicapped children. The school custodian converted a regular desk into a "stand-up" desk in order to give Joe a place to work when he became restless from sitting. A tutor was secured to aid him in subject-matter areas in which he was retarded.

Things went much better in the third grade. Joe received a great deal more understanding and acceptance from adults than previously. The medication enabled him to remain in school for longer periods of time than had been possible, although he was frequently unable to remain for a full day. When he left school early, his mother now did not punish him as she had formerly, and instead she gave him something constructive to do. He began to have some successes in school, although areas of significant retardation remained. Hitting other children was almost eliminated. Having Joe in a regular classroom, however, still presented many problems for all concerned. Nor has it been feasible to put him in a class for mentally retarded children, since the activities would be too stimulating. The best arrangement is a small class with a teacher trained to work with brain-damaged and hyperactive children. (Livos and Norton, 1962.)

As a result of the collaboration of school, social agencies, and parents, Joe is receiving a great deal more attention of a positive nature than he did formerly. This is beginning to have some effect on his behavior, but must be continued if he is to show further progress.

There is an unfortunate tendency for many schools to try to treat the problems of slow learners administratively, without regard for their special needs. Requiring children to repeat grades is one type of administrative action that seldom has beneficial results. This practice is one that has considerable support, however, among traditionally oriented teachers and laymen, who conceive of the subject matter of a given grade as something self-contained and concrete, something that must be mastered before one goes on to the next grade. Research so far reveals no advantages in such a policy—only disadvantages. For example, W. H. Coffield and Paul Blommers (1956) conducted a survey of 302 Iowa school systems in search of seventh-graders who had been failed at least once since the third grade. The 147 students they located were matched, on the basis of their third-grade achievement, with pupils who had been promoted. There turned out to be no difference between the two groups in their performance in the seventh grade; the promoted and the nonpromoted were functioning at the same level. Hence no useful purpose had been served in holding the children back an extra year. Another study of promoted and nonpromoted children by John I. Goodlad (1954) showed that the social adjustment of the promoted slow learners was superior to that of the nonpromoted, and that they were less likely to report that other children disliked or rejected them. In one successful experimental

program, seventh-graders who were a year behind the grade for their age were given an opportunity to take two years in one and thus catch up. Two years later they were not only doing adequate work, but also a lower percentage had dropped out of school than is usually the case for students who have been held back (Chamberlin and Caterall, 1965).

Some research with secondary school teachers suggests that the willingness to fail a student in high school subjects (which is analogous to holding children back a grade in the elementary school) is to a significant degree a function of teacher attitudes. Patrick D. Rocchio and Nolan C. Kearney (1956) asked some four hundred secondary teachers to take the Minnesota Teacher Attitude Inventory. The results were then compared with the percentages of students that each of the teachers had failed. Researchers found that teachers who had more favorable attitudes toward children were less likely to fail students than those who had negative attitudes.

The Problems of Gifted Children. In recent years, particularly since the appearance of the Russian Sputnik in the sky, there has been an awakening of interest in the fate of the so-called "gifted child," a term usually interpreted as referring to the student with the unusually high IQ. The attitude that had commonly prevailed, and one that is still very common, is that students with high IQs can "shift for themselves." After all, being intellectually gifted is an asset, rather than a liability, and it is hard to see why such children need any special help or attention. Yet if one of the prime objectives of our schools is to help children develop their potentialities and talents to the fullest, it is highly probable that we have failed to attain this objective for a large proportion of students with exceptionally high abilities.

One of the difficulties faced by intellectually gifted students is their very superiority in academic ability. As Rudolf Dreikurs (1952*b*) says:

A high I.Q. does not guarantee success at all. In many cases, it is actually a handicap. The child is exposed to constant pressure because his parents and teachers expect extraordinary achievement from him. He becomes easily discouraged if he finds himself unable to live up to these expectations. An increasing number of children with a superior intelligence give up any effort toward achievement, to the extent that they fail even to learn writing and reading. But even if they manage to succeed to the point of excellence, their emotional and social equilibrium remains precarious. They cannot stand defeat without feeling crushed. The obligation to be superior is, therefore, as damaging as the label of inferiority.

Perhaps the problem will be clearer if we remember that it is equally as frustrating for the intellectually gifted child to slow down the pace of his learning to that of the "average" member of the class as it is for the mentally retarded child to attempt to meet standards that are continually beyond his



Henri Argile

It is easy to see how gifted children who are used to reading adult-level material at home might become bored and frustrated with the reading program designed for their grade at school.

reach. Gifted children react to such frustration in various ways. Some lose interest in their daily work and seek escape in excessive daydreaming. Others become hostile and express their frustrations through disruptive behavior. Still others become apathetic and lose interest in work that presents no real challenge to them. A very common problem with some bright children is their lack of persistence with difficult or complex tasks that are outside their general field of competence or interest. Success comes so easily for them in their areas of special interest that they are inclined to give up easily whenever they encounter problems. Occasionally this lack of persistence will extend to a wide area of school learning.

Special Programs for the Gifted. Much of the pressure for special treatment of the gifted student comes from parents, particularly in middle-class urban and suburban areas, who quite understandably want their children to receive extra consideration. Many such parents lose interest, however, when they discover that the usual definition of a gifted child (using the

standard employed by Terman in his study of the gifted) is one who obtains an IQ of 140 or higher on the Stanford-Binet. Some psychologists are willing to consider children with an IQ of 130 or higher as "gifted," but even this standard would include only about three per cent of the children in the average school system. Some school systems, perhaps out of consideration for ambitious parents or perhaps to ensure having a sufficiently large group of children to justify the development of a special program, have lowered the limits of the "gifted" group to 120 IQ or even less, a range to which most psychologists would apply the label "bright" or "above-average bright," rather than "gifted."

Once a school determines which of its students to categorize as "gifted," it may deal with them in three different ways: acceleration, enrichment, and assignment to special classes.

Acceleration has generally been in disfavor among educators. They point out that the eleven-year-old child who has been accelerated, say, to the seventh grade is out-of-step physically, emotionally, and socially with most seventh-graders and should be kept in the fifth grade with his age-mates. Their preferred solution to the problem of the gifted is *enrichment*, a solution that enables the gifted student to remain with students his own age and at the same time to partake of intellectual experiences that are more in keeping with his abilities and interests.

Unfortunately, enrichment is a subject that receives more attention in educational literature and at conferences of educators than it does in the classroom. Developing a program of enrichment is a task that takes a great deal of preparation, planning, and experimentation and cannot be done casually or haphazardly. Enriching the curriculum for one or two gifted children in a class is likely to become an extra burden for an overworked and harried teacher. Some teachers attempt to deal with the problem by grouping their class according to ability and assigning simpler tasks to those with lower aptitude and more complex ones to those with higher aptitude. One of the difficulties with this technique is that students are quick to sense that they are being treated differently from others and often object to being given assignments that are more difficult than those being given other students. The fear of being "different" is one that is fairly common among students in the preadolescent and adolescent years, and many students deliberately do mediocre work in order to avoid being thought superior.

When experimental programs for enrichment have actually been planned and carried out carefully, they have been received favorably by students, teachers, and parents. As we pointed out earlier, experimental programs usually can be counted on to produce conceptual learning and favorable atti-

tude changes, even if no academic advantage is apparent. Research with enrichment programs produces results that are consistent with that statement. For instance, a follow-up by J. A. R. Wilson (1959) of students who had participated in an "ideal" enrichment program in a California junior high school showed no measurable advantage or disadvantage for those who had participated, although both students and teachers thought highly of the program.

Although attempts to evaluate enrichment programs produce findings that are somewhat vague and inconclusive, investigations of the results of acceleration are consistently and decidedly favorable. In general, advantages are most pronounced if acceleration occurs during the high school and college years. One study of the graduates of Amherst College, conducted by Sidney L. Pressey (1946), showed that students who received their bachelor's degrees before the age of twenty-two were far more likely to achieve national and international prominence and avoid failure than were those who grad-

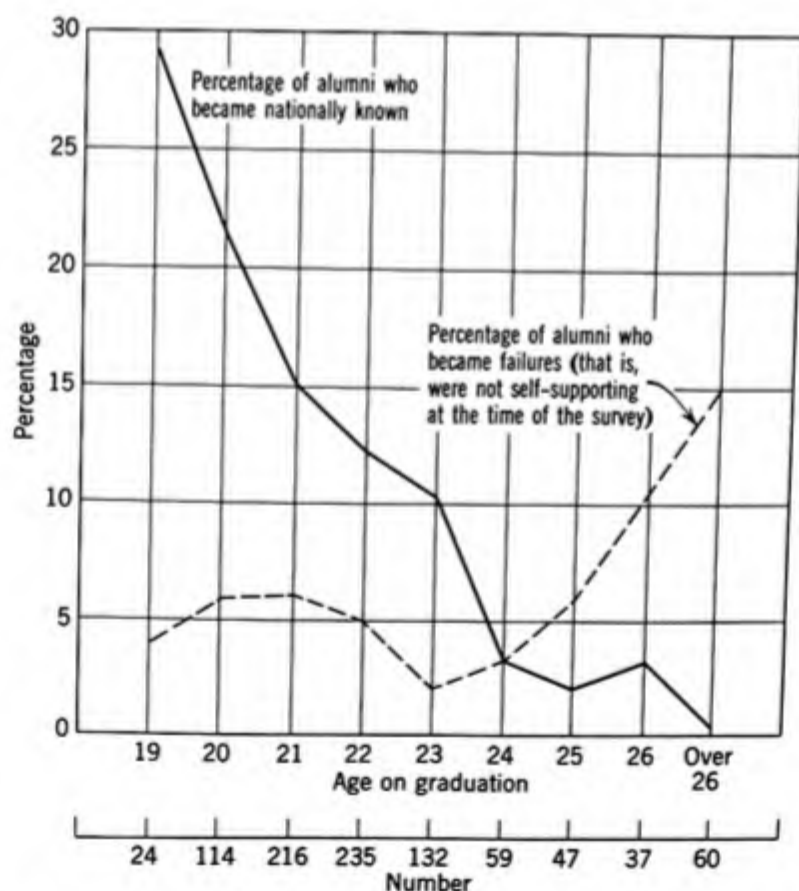


FIGURE 15-2. The after-college success or failure of Amherst College alumni, classified according to age at graduation. (Pressey, 1946.)

uated at twenty-two or later (see Figure 15-2). Another study consists of a survey by the Fund for the Advancement of Education (1957) of 1350 students who entered college about two years younger than the average freshman. Although practically none of these students had completed high school, they not only made academic records that were much better than those made by the average student in their college, but also did better than a group of students who were matched with them in aptitude but who entered college at the usual age. The accelerated students participated more extensively in extracurricular activities, were awarded more academic honors than would be ordinarily expected of students of similar levels of ability, and made a satisfactory social and emotional adjustment to college life.

The finding that accelerated students were well adjusted in spite of having to participate with students who were older is especially interesting, in view of the fears and misgivings that educators often express about the emotional and social adjustment of the accelerated student. Other research studies also fail to show that acceleration has any negative effects on the adjustment of bright students. Vagharsh H. Bedoian (1953, 1954) reported, as the result of a sociometric study of 743 sixth-grade students from twenty-two different classrooms, that children who had been accelerated actually tended to be *more* accepted than the average student. On the other hand, students who were "overage" in their classes (presumably because they had been "held back" for one or more years) constituted a large proportion of the children who were most rejected by their classmates. Not only do gifted children react favorably to acceleration, but it may even be a disservice *not* to accelerate them. D. A. Worcester (1956) states that gifted children who are held back with their age-mates are more likely to develop personality and behavior problems than those who are accelerated. Furthermore, gifted children often become frustrated and bored by educational tasks that are too easy and may thus develop work habits that are characterized by laziness and carelessness.

One of the principal objections teachers have to acceleration is that significant areas of learning may be skipped or slighted, thus putting the gifted student at a disadvantage in the group into which he is accelerated. Some research by Herbert J. Klausmeier (1963) of the University of Wisconsin suggests that these concerns are baseless. Klausmeier did a follow-up in the fifth grade of twenty bright children who had been accelerated from the second to the fourth grade after a five-week summer session and found that they were doing better work than the average fifth-grader, even though they were six months to a year younger. Klausmeier's research shows that with the proper instruction bright children should be able to cover whatever is

taught in the third grade in five weeks and still maintain a superior level of academic performance.

It is the suggestion of James R. Hobson (1963) that schools grant early kindergarten admission to bright children, rather than disrupt their school career by having them skip grades. Hobson's conclusions are based on the experience of the public schools in Brookline, Massachusetts, which have had a policy of admitting children as young as four years (nine months below the statutory age) to kindergarten, provided their mental test scores, physical health, and mental health are sufficiently above average. Over the years, children who have started school under this early admission plan have done consistently better than those admitted at the usual time. They have, for example, won proportionately twice as many honors at high school graduation as other students, their grades have been higher, they have participated and played leading roles in more extracurricular activities, and they have had a 60 per cent better chance of being admitted to college.

Ability Grouping. A third method of dealing with the problems of the gifted student is that of creating special groups. In high school, special classes for the gifted are sometimes called "honors courses," as a way of suggesting a similarity with the kind of independent study arrangements that are found in British and some American universities. Although some high schools have bona fide honors programs, many who claim that they do actually do not, and instead of allowing so-called honors students to do independent study, they put them into classes in which assignments are heavier and grading more severe than in the usual classes. Such classes are actually the top level of systems of "homogeneous grouping," in which pupils are sorted out into classes according to their IQs or their scores on tests of educational achievement. One of the purposes of such grouping systems is that of improving the efficiency of education by providing for each intellectual level the kind of instruction and educational program that is most suitable. Ideally, the students in the top group participate in an enriched curriculum and make faster-than-average progress, while those in the lowest group deal with simpler material and proceed at slower-than-average rates. However, there are a number of practical difficulties that are not apparent at first glance. One difficulty is that groups can never be really homogeneous. There are so many ways in which children can differ from one another that any attempts to separate them into truly homogeneous groups is bound to fail. John I. Goodlad (1960) tells of a fifth-grade class from which children with IQs of over 120 and under 90 were removed, as might be done for the purpose of setting up a system of homogeneous groups. The reading ability of the children in the remaining group (which would be the middle group in

a threefold ability grouping arrangement) ranged from the second-grade to the eleventh-grade level.

Let us take a look at a sixth grade that has been separated into "X," "Y," and "Z" sections on the basis of IQs. The "X" section consists of students with IQs over 110, the "Y" section contains those whose IQs are 95 to 110, and the "Z" section contains those with IQs of less than 95.

As we might expect, most of the students in the "X" section are making better-than-average progress in school, but Bob Crandall is in the "X" section, too, because of his IQ of 125, even though he did so badly in the fifth grade that he had to repeat it. He is still doing failing work in the sixth grade. Libby Friend is also in the "X" section. She gets excellent marks in social studies but failed arithmetic and spelling. Linda Hidalgo is only in the "Y" section, but would be anyone's choice as the most outstanding student in the sixth grade. Everyone likes her, and her essay on "What It Means to Be an American" won first prize in the American Legion contest last year. Most of the children in the "Z" section do not do very well in their class work. They need a great deal of help with their reading and arithmetic. But many of them work harder and are better behaved than some of the children in the "X" and "Y" sections. In fact, this year's "Z" section is much quieter and more cooperative than either the "X" or the "Y" section.

The chief reason why educators and psychologists object to homogeneous grouping is that it encourages students to make invidious comparisons. Even though the basis of the grouping is ordinarily concealed from the students, they eventually ferret it out. Students who are assigned to lower-level sections are likely to feel ashamed and discouraged. Children have a horror of being considered "stupid." Deborah Elkins (1958) makes the point that ability grouping tends to isolate lower-class children even further from the chance of equal participation with middle-class children. Because being assigned to a "Y" or a "Z" section is a mark of inferiority that reflects on the parents, as well as on the child, many parents put pressure on their children to try harder in the hope of getting them placed in a higher group. Even the child who is fortunate enough to be placed in the "X" group is not immune. If he gets anything less than top grades, pressure is put on him by parents and teachers to "work up to capacity." And if there is some emotional reason why he is unable to "work up to capacity," putting more pressure on him will worsen rather than improve his ability to benefit from his classroom experience.

Abraham and Edith Luchins (1948) once asked a number of children attending the fourth, fifth, and sixth grades of a New York City elementary school to express their feelings about the grouping system used in their

Educational Psychology in the Classroom

school. They found that most of the children who were in the "dull" or "average" classes would have preferred to be in the "bright" class. The children in the "bright" class were selective in choosing their friends: they said they would not choose their best friend from one of the two other groups. On the other hand, most of the children in the "dull" and "average" groups said they would choose their friend without regard to his group. The authors came to the following conclusions:

Proponents of homogeneous grouping schemes which bring together pupils of similar ability claim that the duller child tends not to suffer as much from feelings of inferiority and frustration, and the brighter child tends not to be so complacent about his abilities, as might be the case in a mixed group. In this study it was shown that many of the dull-class pupils appeared to feel inferior and ostracized; there was a decided stigma attached to the [average] 2-class label and strong social pressure to be in the [bright] 1-class. The brighter children, in turn, were on the whole snobbish in their attitudes toward those in the 2-class. In brief, homogeneous groupings seemed to help create a kind of caste-system in the school.

Perhaps the most elaborate study ever done of ability grouping was conducted under the direction of Walter R. Borg (1964) of Utah State University. Borg and his co-workers compared two adjacent school districts, of which one was just introducing homogeneous or ability grouping and the other was continuing to follow the standard practice of heterogeneous or random grouping, with enrichment for the more able students. Research data were collected over a four-year period, and the study included some 4000 students from grades 4, 6, 7, 8, and 9. Samples in each of the two districts were matched on the basis of IQ, subjects taken, and social class. During the first year of the study, there were some small differences in achievement that favored ability grouping in the elementary school, but they disappeared during the succeeding years of the study and were counter-balanced by differences favoring random grouping. Comparisons between the two districts' junior high and high school students showed no advantage for ability grouping. Borg concluded that any decision to use either ability or random grouping would have to be based on some other consideration than the expectation of superior achievement.

Borg and his staff also found that schools using ability grouping did have a better distribution of overachievers and underachievers, thus supporting the contention that superior students are challenged more under this system. But they also found that students in ability groups showed more emotional disturbance; this was particularly true of low-ability pupils. As part of his research, Borg reviewed some forty research studies on ability

grouping, conducted over a span of almost forty years, and found no basis for assuming that ability grouping had any advantage over random grouping.

The continued failure of research to find data supporting ability grouping leads one to wonder why teachers remain firmly convinced that it will produce superior results.¹ One possible explanation is that ability-grouped classes are easier to plan for and perhaps easier to control. Teachers somehow have the idea that reducing the intellectual range of the class will cut down the number of different kinds of teaching-learning problems with which they are faced. If this is true, then teacher convenience, rather than student performance and achievement, may be the issue. However, a sounder way of reducing the number of teaching-learning problems might be that of reducing the number of students in the class.

Most elementary teachers do some informal grouping within their classes. Children may be organized into groups depending on how far they have progressed in reading, written expression, or arithmetic. A child may be in the fast group in arithmetic, in the middle group in reading, and in the slow group in written expression. Such groups are relatively flexible, and children may be moved from one to the other in accordance with their progress or lack of it. This practice does not have the shortcomings of a school-wide or system-wide ability grouping policy that we have noted above.

Another promising approach to the problem of grouping is that of the ungraded class, which is composed of children within a certain age span. For example, an elementary school might be composed of groups of children in what are known now as grades 1 to 3 and groups of what are now grades 4 to 6. A child might move through the three years in two, or he might take four years, depending on his speed of learning. Such a system has the advantage of keeping children in the same group for longer periods of time, thus contributing to their feeling of security, and at the same time allowing a great deal of flexibility in permitting children to progress at their own speed.

Most of the questions that we have raised about the desirability of ability grouping do not apply to special classes for *severely* retarded children (below IQ of 75 or so), who need a specialized type of attention which they are not likely to obtain from the average teacher in the average-sized class. They can best be helped by teachers with specialized training, who can also work with their parents. Special classes for this type of child are more readily justified than the usual type of ability grouping, providing that teachers are willing and able to adjust curriculum and methodology to the special needs of the

¹ A poll of California high school teachers showed that 92 per cent favored ability grouping, for example (Albrecht, 1960).



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group. Too often, mentally retarded children are taught the regular school curriculum, but more slowly and more repetitiously, whereas a specially designed curriculum would be more suitable for their needs.

Emotional Problems: Speech and Reading Difficulties. In some respects almost every child who needs special education has an emotional problem of some kind. Sometimes the problem is that of helping him accept the limitations of his disability; sometimes it is one of helping him to realize the potentialities that have somehow become overshadowed by the disability; and sometimes it is a question of helping him to cope with the oversolicitous or rejecting attitudes of adults or other children. A disability usually carries with it the implication of deviation from the norm, and deviations usually arouse anxieties.

However, there is a group of disabilities that not only give rise to emotional problems but are themselves caused by or are symptoms of emotional problems. Such disabilities are characteristic of children who have speech difficulties, are retarded readers, are delinquent, or are "just maladjusted."

We are likely to classify children with speech and reading difficulties separately from the other two categories that we mentioned, because their difficulties seem, superficially at least, to be ones that should be amenable to retraining and reeducation. We tend to think of the child with a speech handicap as one who needs to learn better ways of speaking and the child who has a reading handicap as one who needs to be taught how to read. Such prejudgments often lead us to ignore the emotional problems which underlie these symptoms. This does not mean that retraining is futile. Actually, a great many children are able to improve speech and reading habits with the help of special instructors. But it is doubtful whether these children are helped *merely* because they have learned better techniques. Very likely the emotional support received from having a speech teacher or a reading specialist show personal interest and attention is in itself an impor-

tant factor. And, of course, many children do not learn to read or speak properly, even though they get special instruction and work very hard at trying to improve themselves.

There are two hypotheses that suggest themselves as explanations for the specialists' inability to help some problem cases in reading and speech. One is that the symptoms are caused by severe anxiety—a result, in effect, of the child's putting too much pressure on himself to read or speak properly. Children are inclined to reflect the anxieties and expectations of their parents. If the parent is afraid that the child is never going to read or to speak properly, it is difficult for him to avoid communicating this anxiety (often unwittingly) to his child. Wendell Johnson (1946), who did a great deal of work with stutterers, believed that stuttering is caused by parents being hypercritical about children's early attempts to speak. It is quite normal, Johnson said, for small children to mumble and mispronounce words and to stumble a bit as they learn to talk. The overanxious and overcritical parent, hearing these mispronunciations, is quick to correct his child, fearing that the child may never learn how to say things correctly. The child senses the parent's anxiety about his speech and becomes embarrassed and self-conscious about it. The more self-conscious he becomes, the more likely he is to stutter. It may be added that parental anxieties seldom come singly. Parents who are overanxious and hypercritical about speech are likely to carry this attitude over into other areas of life, or, more likely, the overanxiety about speech may just be one aspect of their feeling about life in general or about their child. Hence stuttering is likely to be a symptom of an overanxious or hypercritical relationship between parent and child, rather than merely an anxious concern about speech. This is why we say that the emotional problem underlies the symptom. This is why, too, it is usually recommended that parents, as well as children, receive psychological treatment.

The other hypothesis, which may be taken in conjunction with the first, is that retraining often does not help because it has not relieved the basic problem. If stuttering or nonreading is symptomatic of such feelings as being afraid of adults, believing that one is worthless and inferior, or living in fear lest one's parents go away, then no amount of practice and drill with correct methods of speaking or reading is going to help. The symptom that we are trying to cure has become an expression of the child's basic life problem, and he will cling to it, no matter how unreasonable his behavior appears to adults.

The relationship between reading problems and problems of emotional adjustment has been shown by a number of studies. One of the more recent

Educational Psychology in the Classroom

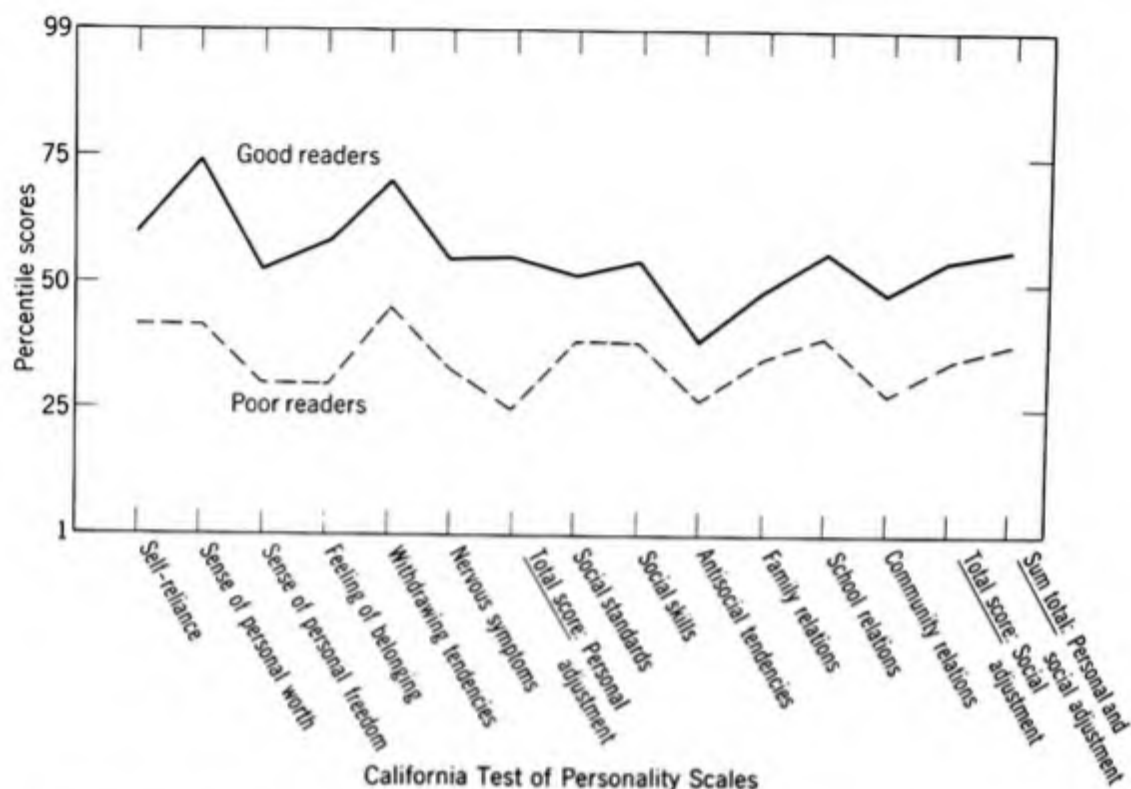


FIGURE 15-3. Differences in California Test of Personality (CTP) percentile scores for a group of poor readers (reading grade placement = 2.2) and a group of good readers (reading grade placement = 6.6) matched in IQ. (Zimmerman and Allebrand, 1965.)

ones compared the personality test scores of two groups of children matched in IQ, with one group reading at the second grade level and the other reading above the norm for the sixth grade. As Figure 15-3 shows, the poor readers scored lower on every scale in the personality test. The two groups were also tested with one of the Thematic Apperception Test (TAT) pictures, which depicts a boy contemplating a violin resting on the table before him. The children were asked to say what is happening in the picture and to give it a title. Their stories give an indication of the differences in attitude between children who have gone far ahead of their class in reading and those who have lagged. One poor reader said:

He don't like to play his fiddle. He's sad. He would like to break it, tear it up, or something. His mother might make him play it. He wanted to play it but he found out he couldn't. He don't play it no more. Title: Sad Fiddle.

Another poor reader said: "He's wishing he couldn't play a violin." When asked why, he said he didn't know. His title: "Violin without a noise."

Some good readers' stories also expressed negative or hostile attitudes, but their general "feeling tone" or "flavor" was quite different:

Learners Who Need Special Attention

A boy with a sad face looking at his violin. He was trying to sneak out when his mother told him to go practice his violin, and he didn't want to, so in his room he sat down and just looked at his violin. His mother will ask him why he isn't playing his violin, then he will start playing, but he will be thinking about playing baseball. I think a good title for it is: A Boy Can't Always Win.

However, most of the stories by good readers stressed achievement-oriented motives such as initiative and hard work, with a payoff in terms of future success. For example:

There once was a boy who wanted to play a violin but he didn't know how, and he felt awful about it. His friend knew how to play it, but he still didn't. He tried, tried, and tried again. Finally he did it, he can play it now. P. S. He's the best of them all. Title: Try, Try Again. (Zimmerman and Allebrand, 1965.)



Audio-Visual Services, Alameda County Schools

Teachers who work with emotionally disturbed children find that games, such as checkers, are a good means of maintaining the children's interest in intellectually stimulating activities and group interaction. Such games may thus have therapeutic value.

Educational Psychology in the Classroom

The fact that emotional adjustment seems a crucial factor in reading disability (or speech disabilities, for that matter) indicates that retraining will succeed only if the underlying emotional problems are also treated successfully. Albert Ellis (1949) studied cases of children aged seven to fourteen, who had reading disabilities and who had been referred to the Northern New Jersey Mental Hygiene Clinic. The treatment of the children consisted of visits by a social worker to the home and the school and of remedial reading instruction. During the year encompassed by the study, the average gain was a little more than half a year in reading ability. Those students who gained the most also had the best instruction: individualized remedial tutoring. Where remedial instruction was haphazard or consisted largely of classroom instruction, the gains were not nearly as pronounced. Children who were judged more severely disturbed than the others also made the poorest progress. Ellis concluded that the most effective approach was one that treated both the educational and the emotional facets of the problem.

Another approach is that of taking the psychological pressure off the child and not making a direct attack on the reading disability. The argument in favor of this method is that it gives the child a chance to work out problems in his own way and at his own pace. This "nondirective" approach has been used with some success by Virginia Axline (1947), who reported some dramatic successes using play therapy with a group of thirty-seven retarded readers. The teacher-therapist created an atmosphere whereby children were not required to give any thought to their reading difficulties, but instead were permitted to draw, play with toys, and talk. Books were available if they wished to try their hand at reading. The teacher-therapist helped the children to talk about their problems and difficulties whenever they wished but did not force herself or her ideas upon them. Not all the children improved during the three-and-one-half-month experimental regimen, but most of them made some gains—even as high as twelve and fourteen months in reading age.

There is still much that we do not know about the relationship between emotional problems and difficulties in speech and reading. Occasionally, of course, the difficulty is organic—that is, the child may have a cleft palate or may be unable to coordinate the movements of his eyes. Maturation, too, may be a factor. Both speech and reading are verbal abilities, and boys tend to develop more slowly than girls in this regard. Hence it is not surprising that boys greatly outnumber girls in respect to speech and reading difficulties. As we have noted previously, boys outnumber girls in most kinds of problem behavior. Perhaps these differences are due at least in part to boys' being forced to learn verbal skills before they have reached the proper point

in their maturational development, as Dorothea McCarthy (1953) suggests, or perhaps all types of problem behavior, including speech and reading difficulties, are related to our inclination to expect problem behavior from boys. Very likely both factors are important and operate together.

Emotional Problems: The Delinquent. Probably no one in school gets more special attention than the delinquent, if we include in that category the child who misbehaves in school as well as the child who has a juvenile court record. In many respects, his problem is more severe than that of the child who has a physical handicap or the child who has difficulties in speech and in reading. We can be sympathetic toward the child with a physical handicap and even toward the child who needs help with speech or reading, but the delinquent child usually evokes more hostility than sympathy. When we hear of some delinquency, our first reaction is likely to be the hope that the guilty party will be caught and punished. Indeed, we often mistakenly assume that the guilty one is delinquent because he has not been punished enough, whereas the likelihood is greater that he may have been punished too often rather than too seldom.

Because the delinquent arouses our hostility and irritation, we are much less inclined to want to understand his problem. Thus the kind of attention we are likely to give him has the general effect of worsening his behavior rather than improving it. Fortunately, there is a growing trend to view delinquency as a sociopsychological problem and to treat it as objectively and as sympathetically as we do, say, the problems of blind or crippled children.

There are, roughly speaking, two main sources of delinquency. Some children engage in delinquency because antisocial behavior is very much a part of their background. Children who grow up in the slums or who come from families where there is little understanding or regard for law and order are likely to find adjustment to school and society more difficult than do children who come from more typically middle-class backgrounds. Inasmuch as we are inclined to prejudge children on the basis of their background, it should be emphasized that *not all or even most* children coming from slum homes will engage in delinquent behavior, but rather that a somewhat higher proportion of them will do so. Usually, what middle-class people think of as antisocial and delinquent behavior has quite a different meaning for children coming from a lower-class background. Allison Davis (1948) made this comment in comparing middle-class values with the values of children from the slums:

Whereas the middle-class child learns a socially adaptive fear of receiving poor grades in school, of being aggressive toward the teacher, of fighting, of cursing,

Educational Psychology in the Classroom

and of having early sex relations, the slum child learns to fear quite different acts. His gang teaches him to fear being taken in by the teacher, of being a softie to her. To study homework seriously is literally a disgrace. Instead of boasting of good marks in school, one conceals them, if he ever receives any. The lower-class individual fears *not* to be thought a street fighter; it is a suspicious and dangerous social trait. He fears *not to curse*. If he cannot claim early sex relations, his virility is seriously questioned.

Although the description Davis has given us of slum values may not be generally applicable to all or even most children who come from lower-class backgrounds, it does help to make the point that such children operate in a different frame of reference than do children from middle-class surroundings. Hence when we attempt to change their behavior, we are, in effect, trying to modify an entire culture. This is not to say that we should not attempt to change their behavior but rather that we should recognize the scope and kind of problem we are undertaking. In short, the problem is not one of reeducating a child here and a child there, but of helping a sizable segment of the community to develop new values and standards of behavior.

A large-scale study of delinquency in the underprivileged areas of Greater Boston, undertaken by Sheldon and Eleanor Glueck, indicates that social class is not the only determining factor. The Gluecks compared five hundred delinquent and five hundred nondelinquent boys, matched as to age, intelligence, background, and residence. They found that the family relationships of the two groups were quite different. The families of delinquent boys were less cohesive; the other members of the family were indifferent or frankly hostile toward them; their parents were inclined to use extremes of laxity and harshness in discipline, and were far more careless and neglectful in supervising them. Figure 15-4 indicates that delinquents were far more likely to get into trouble at school than were nondelinquents. Furthermore, they got into trouble earlier. The average age of the first school misconduct was nine and one half for delinquents, or some three years less than the average age of the relatively few nondelinquents who had disciplinary problems at school. The Gluecks make the point that children who become chronic delinquents show certain characteristic signs at a very early age of the direction in which they are traveling. For example, almost half of them are under eight years of age when they commit their first delinquencies (Glueck and Glueck, 1953). The Gluecks have translated their findings into a scale that they claim enables the very early prediction of future delinquent behavior. The New York City Youth Board, for example, made predictions for a number of children between the ages of five and one half and six and claimed that the predictions proved accurate in 86.5 per cent of the cases.

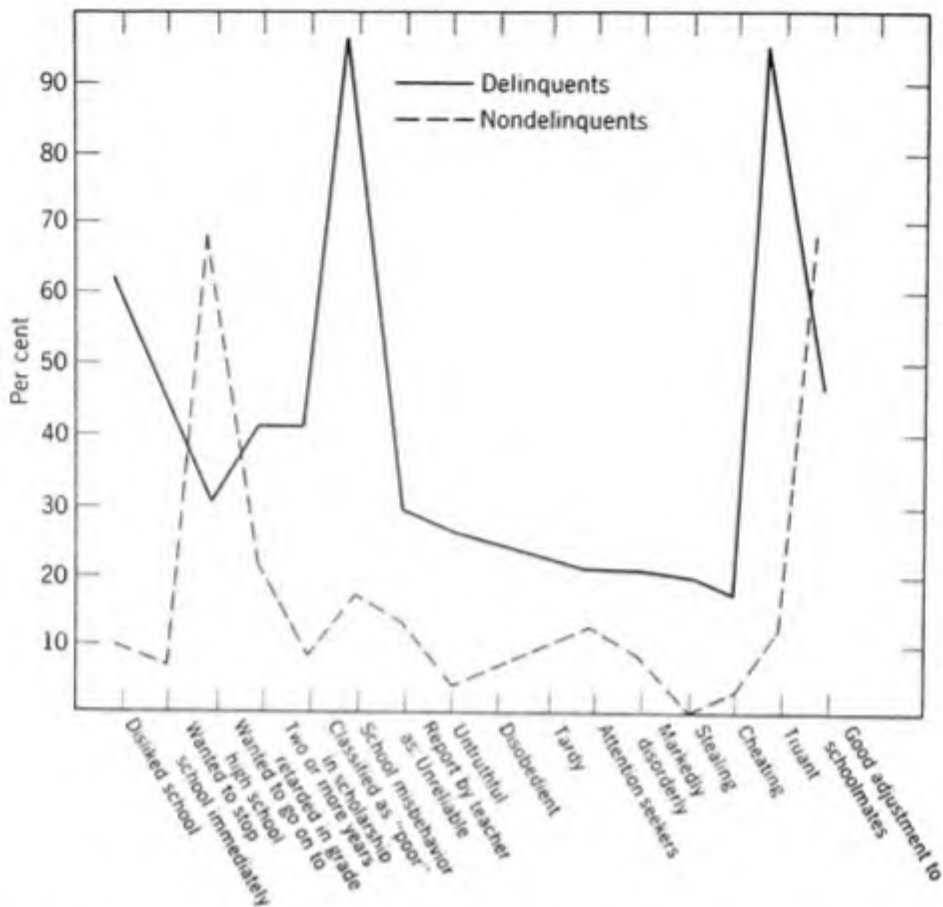


FIGURE 15-4. Comparison of 500 delinquents with 500 nondelinquents with respect to attitudes and behavior toward school. (Glueck, 1953.)

A more careful examination of their statistics, however, showed that the percentage of cases of delinquency predicted correctly was closer to 35 per cent. The danger of using index figures to predict the future delinquency of a child lies in the possibility of making a "self-fulfilling prophecy." The Council of the Society for the Psychological Study of Social Issues, who analyzed the Youth Board's figures, pointed out that "children who are identified and labelled as probable future delinquents are likely to be treated and isolated as 'bad' children by teachers and others who are now subject to the virtually hysterical climate of opinion concerning juvenile delinquency. Such treatment is likely to increase the child's sense of social alienation and, thereby, increase the probability of his becoming delinquent or of developing other forms of psychological maladjustment" (SPSSI, 1960).

A second group of juvenile delinquents are those who come from middle- and upper-class homes. Although this group constitutes only a minor portion of the total number of delinquents, there is some evidence to indicate

that their number may be increasing. The delinquent who comes from such a background is often an emotionally disturbed individual who is unwilling to conform to the standards of society. Basically, he has much the same kind of problem that we discussed in connection with reading and speech difficulties—that is, his problem is primarily emotional, one that calls for counseling and psychotherapy. Often as much psychological work must be done with the parents as with the children, because parents' attitudes and behavior are closely related to the problems faced by their children.

Whether delinquent children will get any real help with their difficulties will depend on the attitude of the community, particularly as it is reflected in the policies of the school and the juvenile courts. If the attitude generally is one of recrimination, blame, and punishment, relatively little will be done to help the delinquent child, because he will be inclined to develop counter-attitudes of resentment, hostility, defensiveness, and discouragement. He may mask these feelings behind a false front of cockiness and bravado, but they will be there, nevertheless.

If, on the other hand, the attitude of community agencies, including the school, is one of recognizing delinquency as an emotional and social problem and providing psychological help as needed, a great deal can be done along the lines of reeducation and rehabilitation.

It is not easy to abandon traditional ideas and methods in favor of a more enlightened approach to delinquency. Unfortunately it is more satisfying emotionally to punish a youthful delinquent than to spend a great deal of time, patience, and energy in understanding and working with him. The policy of patience and understanding does not go down well with citizens who want immediate action. Therefore, schools and other public agencies that wish to deal intelligently with the problems of delinquency are often faced with the necessity of carrying on a continuing program of public education, if they wish to gain support for a more enlightened program of dealing with youthful delinquents.

Vulnerability to Delinquency. All children are at times subjected to pressures and temptations that pull or push them in the direction of delinquency. The children who yield to these pressures are the ones who are more vulnerable than the others or who have to cope with greater pressures. Children who spend the earlier years of their lives in family situations characterized by chronic anxiety, fear, hatred, and insecurity tend to be more vulnerable than other children. Because of the precarious conditions of life in deprived areas like slums and migrant-worker camps, children from such environments are more vulnerable to the pressures and temptations of delinquency. Furthermore, because of the disturbances in family life during the postwar

years, many middle-class and upper-class children have been rendered especially vulnerable; such conditions suggest themselves as a probable cause of the current increase in juvenile delinquency.

When children reach school age, the kind of community they live in begins to assume even greater importance. If the community is keenly interested in meeting the needs of youth through the development of effective schools, adequately supervised recreation, and well-equipped and staffed youth organizations, the pressures on youth to become delinquent will not be as strong.

On the other hand, communities in which citizens are apathetic or cynical and which shirk their responsibility toward the needs of youth, unwittingly foster conditions that make it difficult for youth to resist pressures to engage in delinquent behavior.

The school has an important part to play in creating an atmosphere that strengthens the resistance of children to the pressures of delinquency. One of the ways in which it can play its part is to make school learning a vital and interesting experience. The youth who becomes bored, rebellious, or apathetic is the one who will maintain a record of poor attendance and who will drop out of school at the minimum age for leaving, if not before, if he can find a way. Once out of school, he is a relatively easy prey to delinquency.

Schools can also render a valuable service by developing programs that prevent the spread of delinquent tendencies. Lloyd Allen Cook (1945) reported a long-range study with a high school class whose instruction included group discussion and individual counseling for all students. A sociometric analysis made of the class at the start of the study showed that the center of one strong clique was a boy who had rather well-developed delinquent tendencies. At first he was able to involve the other members of the clique in delinquent behavior, but as the experimental class continued, the clique disintegrated and its members affiliated themselves with other subgroups in the class whose leadership was sounder and whose behavior was more socially acceptable. Because the teachers were able to involve students in educational experiences that met their own needs, the leadership of the delinquent boy lost its attractiveness.

Emotional Problems: The Disturbed Child. So far in this chapter we have said little about the child who does not come under any of the headings that we have mentioned but who needs help, not because of some special reason such as delinquency or the inability to read, but simply because he is emotionally disturbed. However, a child who has severe emotional problems is likely to display other symptoms—that is, he may stammer or be retarded in his reading or have difficulties in getting along with other children.

Educational Psychology in the Classroom

Disturbance in one aspect of life usually leads to or is accompanied by disturbance in other areas of life. On the other hand, there are many children who have rather severe emotional problems, but who somehow "get along." The teacher may not notice them because they are doing average or acceptable work for their age and grade and are not disturbing classroom routines. Sometimes these children are identified by the discrepancy between their IQs and their achievement; sometimes they say or write revealing things about their problems; sometimes the report comes to the teacher at second or third hand.

Emotionally disturbed children are likely to have educational as well as adjustment problems. Of a sample of 116 children referred to the Child Psychiatry Service of the State University of Iowa, almost 60 per cent were below normal limits for their age in reading ability and 74 per cent were below in arithmetic. Only 20 per cent were above the norm in reading and 9 per cent in arithmetic (Stone and Rowley, 1964). Sometimes the first clue a teacher has that a child is emotionally troubled is the fact that he is having difficulty in learning.

Teachers generally do a rather good job of identifying children who need special psychological help. A follow-up study done by Marian J. FitzSimons (1958) with students referred fifteen to eighteen years earlier by teachers in Grosse Pointe, Michigan, shows that teachers were able to identify with a high degree of accuracy those students who became delinquent and those who became seriously disturbed emotionally.

The teacher has the problem of deciding, when he encounters a student he thinks is emotionally disturbed, what he should do. He has to determine whether he has the time to follow through, whether proper facilities—child guidance services, school psychologists, or school social workers—will be available in the event the child must be referred for further help, and whether his attempt to help would be disturbing or even resented. Sometimes it is best not to interfere with a child's struggles to maintain a somewhat precarious emotional balance amid the conflicting forces and events in his life. As we have noted previously, even children who are badly mistreated by their parents tend to have a strong loyalty to them. We used to think that the best policy was to take children out of unsatisfactory homes, but now we are more inclined to keep families together and try to help create healthier relationships within them. Hence it is best for teachers to go slowly—to "feel their way," in effect—in attempting to help children with emotional problems. If a child is having trouble with his school work or in his adjustments at school, the teacher's role is somewhat clearer, for he has a "legitimate" reason for entering the picture, although it is best, under such circumstances, to

proceed slowly and cautiously. But if there is no obvious difficulty at school, the teacher should decide on the extent to which he can include the roles of social worker or psychotherapist in his professional role as a teacher. It is usually helpful and desirable to discuss problems of this sort with guidance workers, supervisors, or administrators.

However, as we have indicated, most children who are emotionally disturbed will react in ways that will affect their ability to benefit from classroom experiences or their relations with other students and with teachers. These children will be in need of some kind of psychological help. An increasing number of school systems are meeting this problem by providing guidance services in the form of clinics, school psychologists and social workers, and counselors, who work closely with children, teachers, parents, administrators, and community agencies in order to improve the mental health of children and to help schools perform their main function of helping children learn.

Irving N. Berlin (1965), head of the Division of Child Psychiatry of the University of Washington School of Medicine, has had many years of experience in consulting with teachers and other educational personnel on the problems of emotionally disturbed, neurologically handicapped, and other types of children with learning problems. What he has to say on this subject is relevant here:

Teachers must first become aware that these youngsters' problems are long-standing ones and will not be easily modified; thus, the teachers' self-expectations must be modest. Secondly, it is important that teachers recognize that the learning process itself provides therapeutic experiences for the child. A teacher's patient and persistent help to the child to take the next step in acquisition of skills and knowledge, despite the many obstacles, is vital to the child's feeling that someone cares and believes that he can be a more effective and successful human being. Third, the teacher needs help in understanding how each child's already acquired methods of dealing with adults in his environment can slowly be altered by new experiences, the teacher's behavior with the child. For example, the emotionally disturbed or neurologically handicapped child has often learned that his temper outbursts in the face of learning tasks usually result in the adult's vacillation and withdrawal of the task. Such a child desperately needs to experience an adult who can live through these temper outbursts with him and who can then firmly help him carry out the learning task. From such experiences, these children begin to develop a different image of themselves, the adults around them, and of their own capacities to learn.

Some recent research making use of analyses of videotape-recorded sessions of regular elementary classrooms, each containing one or more emotionally disturbed children, has shed some light on the way in which such children

may be helped. Contrary to what most teachers believe, there appeared to be no particular techniques that "work" with such children. Instead, the level and kind of activity in which they were engaged reflected the general activity of the other members of the class. Teachers who were able to get *all* students interested and involved in the tasks of learning were the most successful in getting emotionally disturbed children involved as well. Likewise, teachers who had problems with the other class members also had problems with emotionally disturbed children. Teachers who showed the most awareness of what was going on in the classroom seemed to have the best success, both with the emotionally disturbed and with other pupils (Kounin, Friesen, and Norton, 1966).

Identifying "Exceptional Children." Although we have, in the present chapter, taken up and discussed various factors that create special needs in children, it is to be hoped that discussing these factors will not encourage the labeling or classifying of children. Identifying a child as mentally retarded, delinquent, hard-of-hearing, or emotionally disturbed often leads to "snap judgments" and stereotyped thinking. To quote Rudolf Dreikurs (1952*b*) once more on this subject:

Despite our best efforts, exceptional children will remain so until society stops considering them as such, and treats them as human beings who are respected and needed. Then it will become apparent that it is less important what we have, than what we do with what we have. There is no human being—with the exception of the complete imbecile—who cannot be useful and contribute to the welfare of others. Usefulness and contribution are the real basis for social integration, in contrast to our prevalent assumption that superiority gives social status and inferiority deprives. The emphasis on each child's ability to be useful and to participate is the only means to bring the best out in him. Judgmental evaluation, comparison, criticism and humiliation may be effective with a very few, but are damaging to almost all. Success and failure become insignificant if we stop measuring and comparing, judging and condemning. Then alone can we stimulate children in their development and function, not toward becoming a success, but toward becoming a useful social being, who has a secure place in the group regardless of what he is and how much he can do.

SUMMARY

Although it has been traditional in education to feel that children should adapt themselves to the school, there is a growing belief that the school should meet the needs of children—even the needs of children who require more than the usual amount of educational services. Such children, sometimes disig-

nated as "exceptional children," are those who are hard-of-hearing, blind or partially seeing, cerebral-palsied, crippled, "delicate," speech-defective, mentally retarded, gifted, epileptic, delinquent, and emotionally disturbed. Such classifications and labels are largely arbitrary, as far as special needs are concerned, inasmuch as the kind of specialized help needed by a child with special problems depends largely on the individual, his background, the attitudes of the community, and the school situation. Indeed, we often do a child a disservice by classifying him at all. Classifying children as "exceptional" or "atypical" sometimes lays the groundwork for prejudiced or stereotyped thinking, which, in turn, may develop feelings of apathy, hostility, overdependency, fear of failure, and discouragement on the part of the child whom we are trying to help.

Special adjustments in teaching methods and curricula are sometimes necessary, particularly for children who are mentally retarded. Instead of going over the standard curriculum more slowly and with much repetition, teachers should develop classroom experiences which are closely related to the immediate needs of the mentally retarded child, using concrete and specific problems and materials.

We are inclined to underestimate the learning ability of mentally retarded students. For one thing, most of them eventually make a much better adjustment to adult life than would be expected from their childhood intelligence test scores. The common practice of holding slow learners back a grade appears to have no advantage and may even worsen their adjustment to school.

Intellectually gifted children have more educational problems than is commonly supposed. Our tendency to expect a very high level of academic performance of them may serve to complicate their problems. Schools that want to provide special treatment for these children may do one of three things: accelerate them, enrich the learning situation, or assign them to special classes in some kind of system in which students are grouped according to their scores on mental-ability tests. Acceleration produces the best consistent results, but meets with the most disfavor from teachers and administrators, who feel that a child may miss something important if he skips grades or that he may be too immature. Instead, they favor enrichment or ability grouping, particularly the latter. Research has so far failed to produce any evidence favoring either of these approaches; indeed, ability grouping tends to increase anxieties and feelings of inadequacy among children, particularly those who are put into the slow groups. The fact that teachers favor ability grouping so strongly suggests that they must look upon it as a more convenient method than the usual practice of random grouping.

Most children who have special education needs also have emotional prob-

lems of some sort. Two common problems are speech and reading difficulties. Although such problems are usually perceived as primarily instructional, they are likely to be emotional and to require some kind of psychotherapy in addition to or instead of special instruction. Very often speech and reading problems are an outgrowth of difficult relations with parents, in which event it may be necessary or desirable to include parents in the treatment.

The problems faced by delinquent children are generally more difficult and complex than those of other "exceptional children," because of the hostility and resentment they must face from society. Because we have less sympathy with delinquent children, we are likely to worsen their situation by drastic treatment of some sort. According to Allison Davis, some delinquent behavior is not so much willful misbehavior than it is the normal behavior of lower-class groups. However, a study by Sheldon and Eleanor Glueck indicates that there are factors which predispose some children from underprivileged areas to delinquency. Delinquent behavior outside of school is usually accompanied by misbehavior in school, retardation, truancy, and a general distaste for school. The school, as well as other agencies of the community, can be of great service in reducing delinquency by becoming a more attractive, interesting place for children. The vulnerability of children to delinquency is increased if school is the kind of dreary, uninteresting place from which one must escape to find satisfaction and freedom.

Some children need special help, not so much because of abilities or disabilities, but because they are emotionally disturbed. When teachers discover such children, they must decide how much help they can give them or whether they should be referred to professional workers or agencies who specialize in helping children with emotional problems.

Above all, teachers are urged not to label children as "exceptional" but to treat each child as an individual who deserves respect and is entitled to as much help as he needs—but no more—in his task of learning to become a mature and adequate person.

SUGGESTED PROBLEMS

1. Visit the local office of the State Bureau of Vocational Rehabilitation or the Vocational Rehabilitation Office of the local Veterans Administration (having first written or telephoned for an appointment). What are some of the key problems they encounter in their work, particularly with regard to the attitudes of their clients and the general public?

2. What facilities are available in your community to help families who have children with special needs of the kind we have listed or described in

this chapter? What kind of services do they offer—financial assistance, vocational counseling, casework, psychotherapy, placement? How extensive is the help they provide?

3. What psychological and social work services are available in your community for children who become delinquent? What work of a rehabilitational nature does the Juvenile Court do to help delinquents become emotionally healthy and socially mature? What is the Court or the community doing to prevent delinquency?

4. What would some of the chief arguments be for and against placing a severely disabled child—blind, deaf, cerebral-palsied, or mentally deficient—in an institution as compared with keeping him at home and letting him attend special classes or schools in his community?

5. What are some of the important factors or conditions that make children “vulnerable” to delinquency?

SUGGESTED READINGS

- Borg, W. R., *An evaluation of ability grouping*. Logan: Utah State University, 1964. (Obtainable from the University Bookstore.) The most extensive study of ability grouping to date.
- Donahue, G. T., and Nichtern, S., *Teaching the troubled child*. Glencoe, Ill.: Free Press, 1965. A study that takes issue with traditional methods that isolate emotionally disturbed children from their families, their peers, and the community. Suggests the use of “teacher-moms,” who provide a meaningful one-to-one relationship.
- Drews, E. M., ed., *Guidance for the academically talented student*. Washington: National Education Association and the American Personnel and Guidance Association, 1961. A useful resource handbook.
- Garrison, K. C., and Force, D. G., Jr., *Psychology of exceptional children*, 3rd ed. New York: Ronald Press, 1959.
- Goodlad, J. I., and Anderson, R. H., *The nongraded elementary school*. New York: Harcourt, Brace, and World, 1959.
- Hathaway, W. P., *Education and health of the partially seeing child*, 4th ed., revised by F. M. Foote et al. New York: Columbia University Press, 1959.
- Henry, N. B., ed., *Education for the gifted*. 58th Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1958.
- Henry, N. B., ed., *The education of exceptional children*. 49th Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1950.
- Ingram, C. P., *Education of the slow-learning child*, 3rd ed. New York: Ronald, 1960.

Educational Psychology in the Classroom

- Magary, J. F., and Eichorn, J. R., eds., *The exceptional child*. New York: Holt, Rinehart, and Winston, 1960.
- Rosenzweig, L. E., and Long, J., *Understanding and teaching the dependent retarded child*. Darien: Educational Publishing Corporation, 1960.
- Sarason, S. B., *Psychological problems in mental deficiency*, 3rd ed. New York: Harper, 1959.
- Seidman, J. M., ed., *Educating for mental health*. New York: Crowell, 1963. A number of selections in the final sections, "School practices" and "Community practices," are relevant to this chapter.
- Terman, L. M., and Oden, M. H., *The gifted group at mid-life*. Stanford: Stanford University Press, 1959. Contains a review of the research conducted by Terman in his study of the behavior and traits of 1000 gifted persons from childhood in 1921 until the middle 1950s.
- Wattenberg, W. W., ed., *Social deviancy among youth*. 65th Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1966.

16 Problems of the Socially Disadvantaged Learner



Ken Heyman

In the preceding chapter we noted that the increased interest in educational programs for the high-IQ students received a sudden boost when the Russians launched their first space satellite. The realization that the Russians had made notable advances in technology caused some concern in America, which in turn led government leaders and educators to make increased investments of time and money in special educational programs for gifted students, particularly in the fields of physical science, mathematics, and engineering. As often happens when there has been a concentrated and extended effort in one direction, the pendulum of public interest has now begun to swing the other way, and for the last few years there has been renewed attention to programs for students at the opposite end of the educational spectrum, namely, children who have severe school learning problems by reason of their isolation from the main stream of American middle-class culture. These are the children who are variously described as "socially disadvantaged" or "culturally deprived." Although "socially disadvantaged" is probably the more accurate term, we shall employ the two terms interchangeably because both are common usage among educators, psychologists, sociologists, and social workers.

Socially disadvantaged children are those children who grow up in various American cultures or subcultures outside the middle-class or core culture. The common denominator that characterizes these children is poverty, and the majority of them live in urban and rural slums. Most of these children are white, but substantial numbers of them belong to minority groups, especially Negroes, American Indians, Puerto Ricans, and Mexican-Americans, whose poverty is made all the more burdensome by racial or ethnic discrimination and prejudice.

Although this country has had almost a quarter of a century of economic progress and affluence, unmarked by a major depression, one fourth to one third of our people still live lives that are marked to a greater or lesser degree

Educational Psychology in the Classroom

by poverty. The key to advancement in our society is education. Education is not only free for the asking, a certain amount of exposure is required by law. But the law can only go so far; it cannot force children to learn. By and large, middle-class children do not have to be forced or compelled to go to school. They attend more or less willingly and respond to teachers' demands and expectations more or less eagerly. However, socially disadvantaged children often seem unable to respond to classroom instruction as effectively as the children of middle-class families. Growing up poor, many of them seem unable to learn the skills and attitudes that they must have, in order to escape from the poverty of their parents, and thus find themselves doomed to lives of frustration and apathy.

Our urbanized, industrialized culture grows more complex with each succeeding year. This complexity is to a significant degree a reflection of the fact that the needs and interests of our population are growing more diverse. This complexity also allows for a greater degree of individuality and self-expression, but only for those persons who have learned the kinds of skills and attitudes that are needed to function within such a culture. Those who do not learn these skills and attitudes find themselves to an increasing degree alienated from the rest of society. As they stand on the outside, looking in, they are unable to understand why it is that they do not enjoy the benefits and freedoms that others seem to have just for the asking. It does little good to explain to them that economic and social rewards in our culture must be earned; that the attainment of these rewards takes long-range personal planning, as well as work that is at times tedious, at times interesting, but always demanding; and that a reasonable degree of personal commitment and dedication is essential. They are unable and unwilling to accept such explanations and instead prefer their own oversimplified version, namely, that success is a matter of luck or chance. They maintain that inasmuch as they are the unlucky ones, they will never succeed by their own efforts, and it is therefore the responsibility of the successful (lucky) person to share his good fortune with them. Their usual reaction to their own status tends to be one of apathy and resignation, but the accumulation of resentment and frustration sometimes boils over, as it did in the Watts riots in Los Angeles County in 1965, or it may express itself in sporadic episodes of crime and violence.

What legislators and the general public are coming to realize is that because the attitudes and expectations of the socially disadvantaged and the school are so far apart, the educational system does not work very well for a large minority of the nation's children.¹ Some children from disadvantaged

¹ Just how many children come from homes in which self-perpetuating poverty is the rule is hard to say. The most conservative estimate is one fifth (Guthrie and Kelly,



Henri Argile

Children of the poor often have to take on adult tasks and responsibilities long before they are ready.

environments are able to respond to the demands of the system and progress satisfactorily through the secondary schools and even into college, but the majority never really become fully integrated. The substantial appropriations of Federal and state money that are currently being made to provide special services and programs in schools attended by such children are a visible indication of the growing public awareness that our schools, as presently constituted, do not reach lower-class children and, in effect, tend to perpetuate their alienation from our middle-class society.

1965). Frank Riessman (1962) has estimated that one third of the children in metropolitan schools were culturally handicapped in 1960 and that the proportion would grow to one half by 1970.

WHAT SOCIAL DEPRIVATION MEANS

The Slum Environment. It may be well, as we begin this discussion of social deprivation, to describe in more detail one kind of environment that is likely to be populated by socially disadvantaged children. The environment from which most of them come is not as confused, disintegrated, or turbulent as the one we are about to describe, but most slum settings possess some of its qualities.

This particular slum was created almost overnight, when the New York City government took over an old hotel and filled it with indigent families. The changes that took place in the neighborhood are described vividly by Samuel Tenenbaum (1963) of Long Island University:

Hordes of children, like milling cattle, cluttered the once empty street; children of all ages, from one year to—well, they looked like eighteen and twenty. Boys and girls mixed in packs, and it was difficult to think of them as single, individual children. They shouted, they screamed, they pushed, they fought. In the midst of play, they would suddenly get into individual fights and collective fights. Violence, aggression, play, and friendliness seemed all mixed up. Every wall on the block was used, either to play ball on or to throw things on. The streets became cluttered with debris, especially broken glass. Where they got all this glass to break is beyond me. The area around this hotel became one vast accumulation of litter. Also, it was quite common for children to throw things at passersby. The parents apparently did not object, for I never saw a parent reprimand a child for this. The children resembled an uncontrolled, undisciplined herd, doing what they wished, with neither mother nor father in sight to curb, admonish, or chastise. . . .

The parents of the children . . . acted strangely. In all states of undress, they hung out of windows, while below mixed adult groups, and groups including children congregated, drinking beer, joshing, pushing each other about and carrying on in a merry and boisterous way through all hours of the night. . . .

Tenenbaum lived in a respectable middle-class apartment house across the street from the old hotel. His neighbors were understandably consternated by the transformation that had taken place:

There was one type of behavior, however, that affected my neighbors beyond all others. I cannot say that they liked to see children smoking or engaged in open sex play; it violated their sense of morality. But they could somehow stand that. What they couldn't stand, what frightened them, was the violent, hostile way in which lower-class families found their amusement. An almost palpable atmosphere of aggression and violence hovered over the street. The children would attack an automobile—literally attack it as locusts attack a field—climb on top of

Problems of the Socially Disadvantaged Learner

it, get inside, and by combined co-operative effort shake and tug until they left it a wreck. The older men would strip the tires from a car and sell them. A three-wheeled delivery bicycle from a local merchant provided a special holiday. The children gathered from nowhere and everywhere, piled on the delivery bicycle, and drove it up and down the street loaded with humanity. When they made no dent in the vehicle by this misuse, in disgust they poked at it and pushed it in an effort to make it come apart. I have never seen young people work so assiduously as they did riding, pushing, and shaking the cart. They didn't give up until it was completely destroyed. I have seen children, several of whom could not have been more than seven or eight years old, at this job of destruction past 10 P.M.; and they all appeared to be having the merriest time. Even their innocent, friendly play was violent. Suddenly, strong, tall, gangling adolescent boys would dash pell-mell down the street, like stampeding cattle, shrieking and screaming, pushing, shoving, mauling each other.

Tenenbaum continued his analysis by speculating on the problems that such children would have in the typical school, organized as it is to teach and perpetuate middle-class values and behavior:

... I could see how wrong, how incongruous and meaningless this school was for lower-class children; how their very being was an irritant to it, and to them; how ill-prepared they were for the demands of the school; how what they were and how they lived would elicit from their middle-class teachers scorn, resentment, rejection, hostility, and—worst of all—how these children would create in their teachers fear, a physical, sickening fear, as thirty or forty of them crowded together in one room hour after hour, day after day. This was the most demoralizing feature of all. For once fear sets in, you can no longer understand, appreciate, or help; what you want is distance, separation, safety; or if this is impossible, you want the backing of superior strength or a counter fear; and one cannot educate or help another human being through force or fear.

... Like my neighbors, teachers remain in a perpetual state of fear of these children, at their acting out, their defiance of discipline, their destructiveness and vandalism. "Look what they did!" a teacher will say, pointing to a desk ripped open or shattered panes of glass, speaking as if some holy altar had been violated. Looking at these lower-class children distantly, unapprovingly, and judgmentally, as my neighbors did, many teachers feel trapped, frightened, helpless. Like my neighbors, when a child gets into trouble with the law, they often take a smug satisfaction in the tragedy, as if their original judgment had been vindicated. "I knew he would come to a bad end." Middle-class virtue is written all over them.

Tenenbaum's conclusions are borne out by some research by Newton S. Metfessel and J. T. Foster (1965) of the University of Southern California, who analyzed the behavior of culturally disadvantaged children in preschool

settings. Here are some of their observations, together with examples, that highlight the kinds of difficulties these children and their teachers experience:

1. Culturally disadvantaged children seem generally unaware of the "ground rules" for success in school settings.

A child disrupted group activity by making silly noises and facial expressions. He was removed from the group, the problem was discussed with him, but he resumed his disturbing behavior when he was returned to the group.

One child came late to school, interrupted a group story by saying in a whining voice that there was sand in his shoes. The teacher told him that he could empty the shoes outside and went back to reading the story. A short time later she looked up to see him shaking sand out of his shoes onto the floor.

2. Culturally disadvantaged children are less able to learn from being told than are middle-class children.

Although the teacher held repeated discussions with children with regard to the need to observe safety regulations and follow the "traffic-circle" protocol when using wheeled toys, one child persisted in going in the wrong direction and was surprised when his fire truck rammed an Irish Mail.

A child was asked to sit and talk with the teacher about crashing into another child's tricycle, but found many excuses for getting up and running off.

A policeman visited the school and talked to the children about the need to be careful in crossing the street. The next day when the teacher showed the children a picture of a policeman helping a child across the street, they insisted he was taking the child to jail. Although the teacher persisted in questioning the children, they were still unable to tell her that he was helping the child cross the street.

3. Culturally disadvantaged children are often unable to make simple symbolic interpretations.

When one child was shown a picture of an apple and was asked what he saw that was round and good to eat, he said "Chicken."

4. Culturally disadvantaged children tend to have short attention spans and consequently have difficulty in following directions.

A child who had been working with a group decorating Christmas wrapping paper, wandered away when he was not helped with a succeeding step by the teacher, even though the work of other children at the table could have been used as examples of what to do next.

5. Culturally disadvantaged children are unable to use language in a flexible way.

Although a child had been taught that there are a number of different kinds of animals, when the teacher introduced a picture of a cat with the words, "Now I'm going to show you a picture of an animal . . .," he interrupted by saying, "That's not an animal, that's a cat."

6. *Culturally disadvantaged children tend to have little concept of relative size.*

A child was unable to select "the large piece of paper" while working on an art project, even though the teacher had shown the difference between paper sizes.

7. *Culturally disadvantaged children are less likely to perceive adults as people to whom they can turn for help.*

A child who wanted to use a tricycle stood by and cried instead of asking a nearby teacher for the toy.

A child who was having difficulty in using a toy pounded at it in vain, although a teacher was standing nearby and would have helped him, if asked.

8. *Culturally disadvantaged children seem to have a low level of curiosity about things.*

None of the children explored or investigated a barrel that had been placed out in the yard in a conspicuous place.

The teacher showed the children a box that jingled when shaken. When she asked them to guess what was in the box, none of the children responded.

9. *Culturally disadvantaged children's experiences lie within a very narrow range.*

The teacher told the children a story and then asked them questions about it. It turned out that almost none of them had any idea of the animals mentioned in the story: cow, sheep, goat, duck, and bear.

Some of the children had never been to a park or a restaurant or cafe.

The Home of the Socially Disadvantaged Child. One middle-class value that has great importance both for child rearing and for school practice is that each person is an individual, with rights, privileges, freedoms, and responsibilities that help to define and maintain his individuality. This principle is less important or completely ignored in homes of socially disadvantaged children. Children there are less likely to be regarded as individuals with different personalities—they are just "young 'uns." This comes about partly because there are likely to be many children spaced closely together, thus making it difficult for parents to give any single child much individual attention without neglecting the others. Furthermore, lower-class life is always precarious: there are many crises and crushing problems. Hence parental attention that might ordinarily be directed toward children is likely to be distracted by some situa-



Library of Congress

The majority of socially disadvantaged children live in rural and urban slums and grow up in social environments outside the middle-class core culture.

tion that demands immediate attention, such as trying to talk the man from the loan agency out of repossessing the family car, looking for a job, or trying to salvage something out of the family dinner that fell on the floor when the rickety old table collapsed.

The absence of the father is another factor that simultaneously creates or aggravates family problems and reduces the amount of adult attention children can receive. Fathers are more likely to be absent by reason of desertion, death, or divorce in socially deprived homes than in middle-class homes. As we have noted previously, children from middle-class homes have higher IQs. It is quite possible however, that some of this difference can be attributed to the greater likelihood of fathers' absences in lower-class homes. Martin Deutsch and Bert Brown (1964), who reported the latter finding, also discovered a relationship between IQ and preschool experiences of children. Children who had attended preschool (nursery school and/or kindergarten) tended to have higher IQs than those who had not. Subsequent differences in

IQ were actually more pronounced in the fifth grade than in the first, showing either that preschool experience has a very pervasive or long-lasting effect or that the kind of family that sends its child to preschool is a different kind of family and has a different kind of an effect on a child than the family who does not send children to preschool. The higher the social class, the more likely children were to attend preschools. Thus some of the differences in IQ between lower- and middle-class children can be explained, at least in part, by the presence or absence of the father and the willingness of families to send their children to preschool.

Children in lower-class families are less likely to be sent to preschool because parents do not think it is very important. Parents take the attitude that because all that children do in such schools is play, a child could just as well play with his brothers and sisters and the other children on the block. The middle-class parent, on the other hand, is aware that success in life is to a large extent based on the ability to get along with others, and the sooner the child learns the social skills of cooperating and communicating with children, particularly with children whom he has never seen before, the better. Hence preschool is seen by middle-class parents as the first step of a long sequence of school experiences that will hopefully produce an educated person ready to take his place in today's world.

Middle-class parents believe in listening to and responding to their child, in trying to communicate with him on his level, and in attempting to adjust some of the conditions of the home to his particular interests and needs. The lower-class parent is less likely to attend to his children on an individual basis, even though he may be genuinely fond of them. He is also much more likely to agree with the statement "Too much love and attention will spoil a child."

Jules Henry (1963) has pointed out that middle-class homes contain a "hidden curriculum" that enables children to adjust to their first school experiences. By this statement, Henry refers not so much to the incidental information and the verbal skills that middle-class children pick up during preschool years, but to the orientation that they obtain to life in general and to themselves as individuals. However, the most significant part of a middle-class child's early training, as far as school success is concerned, is the kind of reinforcement for behavior he learns.

Social Reinforcement. In our earlier discussions of learning, we mentioned the operant theory of learning, a theory holding that we learn to repeat certain forms of behavior that have become reinforced because they have become associated with or rewarded by pleasurable or satisfying stimuli. One of the problems with applying such a theory to classroom learning has been the matter of determining what kind of stimuli will be reinforcing for stu-

dents. Evidently, there are significant differences between what is rewarding and reinforcing for lower-class students and what performs the same function for middle-class students. In Chapter 4 we mentioned some research by Edward Zigler and his associates (1962) which is typical of a number of studies that show differences in the way middle-class students and lower-class students respond to social rewards. In Zigler's experiments, a child received one of three kinds of reinforcement for success in a series of tasks: (1) He was told that his response was "correct," (2) he was told that his response was "good," or was praised in other ways, or (3) he was given some tangible reward for each correct response. The first type of reinforcement is what might be termed an "ego reward"—the kind of reward sought by a self-sufficient learner. The second type makes use of social approval. The first two types of reinforcement are symbolic and abstract in nature, whereas the third type is concrete and "real." Zigler and his associates found that middle-class children were more likely to respond positively to symbolic, socialized rewards, than to tangible ones, whereas lower-class children responded better to tangible rewards.

What this means in the classroom is that middle-class children will apply themselves to learning tasks if reinforced by social rewards, such as the approval of the teacher, either expressed on the spot, so to speak, or communicated at the end of the term in the form of a grade. Middle-class children will also respond positively to ego rewards—that is, they will apply themselves because they get pleasure out of learning a skill or completing a task and knowing that it is done correctly. They are, in effect, *self-reinforcing*. This is a tremendous advantage for the teacher of some thirty or forty children because it means, for example, that when children are doing "seat work," he does not have to go around the class and say or do something encouraging to each child every few problems or so. The teaching machine developed along Skinner's principles that we discussed in Chapter 8 depends on ego reinforcement. The student answers the problem and then checks to see whether he was correct. The knowledge that he was indeed correct is assumed to be sufficient reinforcement for him to go on to the next problem.

Lower-class children are much less likely to be reinforced by these more or less indirect methods. Rewards for them have to be concrete. School grades represent both social and ego rewards for middle-class students, and poor grades are likely to arouse both guilt and anxiety. James Olsen (1965) says:

For the middle-class child, how one does on a test determines one's mark and that determines promotion and the likelihood of future academic success. When a teacher threatens a middle-class child with a failing grade, he is really threatening the basis of that student's personal worth.

Children from socially disadvantaged homes, however, are likely to be unmoved by grades. Nor do the other kinds of social reinforcers, either positive or negative, have much effect:

Unlike middle-class children, the lower-class child rarely responds to moral exhortations which are intended to evoke feelings of guilt or shame.

Postponement of Reinforcement. Another point relates to the time interval between completion of a step in a learning task and the reinforcement or reward. In general, learning is likely to be accelerated if reinforcement is applied promptly. This is not feasible in most school situations. In the seat-work example given above, the teacher would find it impossible to reinforce the learning behavior of each student with each increment of progress. Instead, reinforcement is postponed until workbooks can be corrected and grades assigned. The experiences that middle-class children have had during early childhood have prepared them for such postponement of reward. From infancy on, they are told: "Eat your spinach and then you can have a chocolate sundae for dessert." "If you are a good boy this week, Grandad will take you to the rodeo Saturday." Socially disadvantaged children have difficulty in visualizing *any* future reward. Rewards for them have to be not only concrete, but immediate. In their world, promises mean nothing; what counts is what they get right now. Hence this is another reason why school marks mean little to them. Not only are marks social or ego rewards that count for little in their world, but they are also applied hours, days, weeks, and even months after the behavior to which they are appropriate has taken place. As a consequence, the child is unable to see any relationship between school marks and his performance in learning tasks. If he gives marks any meaning at all, it is in terms of whether the teacher likes him or not.

n Aff versus n Ach. Although the socially disadvantaged child is likely to feel isolated from the middle-class culture represented by the teacher and school, his need to belong is undiminished. Actually, his need for affiliation (n Aff) is likely to run higher than that of the middle-class child. Living as he does in a primarily hostile culture, family and group ties are very important to him. One of the few times when lower-class families unite to defend their children is when they have been threatened by an outsider: a gang, another family, or the police. It does not matter what the child has done or whether he was the instigator, the fact that he is under attack is enough to bring his family or his gang rallying around him.

Such group solidarity does, however, have its price. Culturally deprived people tend to be quite suspicious of the motives of anyone in their group who wishes to better himself. The slum resident who tries to become middle-class is regarded with jealousy and downright hostility: he is accused of being

"uppity," "too good for his friends," or "trying to become one of *them*." The lower-class people tend to believe that a person can improve his lot only at the expense of others. In factories where piecework systems prevail, lower-class workers will limit their production to what they believe is adequate and refuse to work harder and make more money, because of the fear that the pay rate would be lowered, whereupon they would have to work still harder to make the same amount of money. Workers tend to feel that they are better off if they present a united front against the employers and thus remain free to make their own decisions as to how much they should produce. The few workers who produce more are regarded as traitors, harassed, made the targets for abuse, and called "rate busters." This attitude of intense loyalty to the group, accompanied by discouragement of individual effort and achievement, affects the performance of lower-class school children, as well as that of their parents. The need for achievement (*n Ach*) is not likely to be very strong when *n Aff* dominates students' motivation. If achieving means being successful in academic competition, such a student prefers not to achieve.

"Good Behavior" versus Achievement. Although some lower-class parents maintain a defiantly hostile attitude toward school and school authorities, just as they do toward other governmental agencies that levy demands on them, most of them make at least a show of compliance. They are, after all, members of a national culture in which school is considered to be a "good thing." They may not understand the reasons *why* school is valued in our culture, but they understand enough to know that children should be sent to school and that they should "behave themselves" while there.

Indeed, "good behavior" may be emphasized by them to the exclusion of other aspects of school life. A lower-class child is likely to be admonished by his mother to "Be good, do what the teacher tells you, and don't get into trouble." A middle-class child is exhorted to "See if you can't get *all* your arithmetic problems correct today," or, "How about making an A in social studies instead of a B!" The lower-class parent glows with pride when the teacher says, "He's a good boy," but the middle-class parent is more concerned with the child's progress, and wants to know, "Is she doing any better in spelling?"

THE EFFECTS OF SOCIAL DISADVANTAGES

Differences in Mental-Growth Rates. In our chapter on intelligence and creativity, we suggested that the IQ is a useful and convenient index to human effectiveness and competency. Although the IQ is certainly not absolute or definitive, it can be used as a general measure of the cognitive func-

Problems of the Socially Disadvantaged Learner

tioning of people studied collectively. We would therefore expect that differences between socially deprived and enriched environments would be reflected in differences in IQ. Benjamin S. Bloom (1964) of the University of Chicago has done an intensive study of environmental effects on human characteristics and reports that a conservative estimate of the difference between a deprived and an enriched environment is 20 IQ points. In other words, persons who might get IQs of around 100 in an enriched environment, would be expected to receive IQs of around 80 in an impoverished one. Twenty IQ points is, as Bloom points out, a considerable gap. It can make the difference between institutionalization and a reasonably productive life in society, or it can make the difference between a professional career and a semiskilled job.

Bloom also points out that the earlier children have the kinds of experience (social and intellectual stimulation) that are consistent with later success, the greater is the likelihood that they will develop the skills and attitudes relevant to success. Early environment is thus more significant for development than later environment. Figure 16-1 shows how this principle works. Note that Negro students born and raised in Philadelphia maintained the same mean IQ (in the 96 to 97 range), whereas the IQ level reached by other Negro students depended on when they left the more rural environment of the

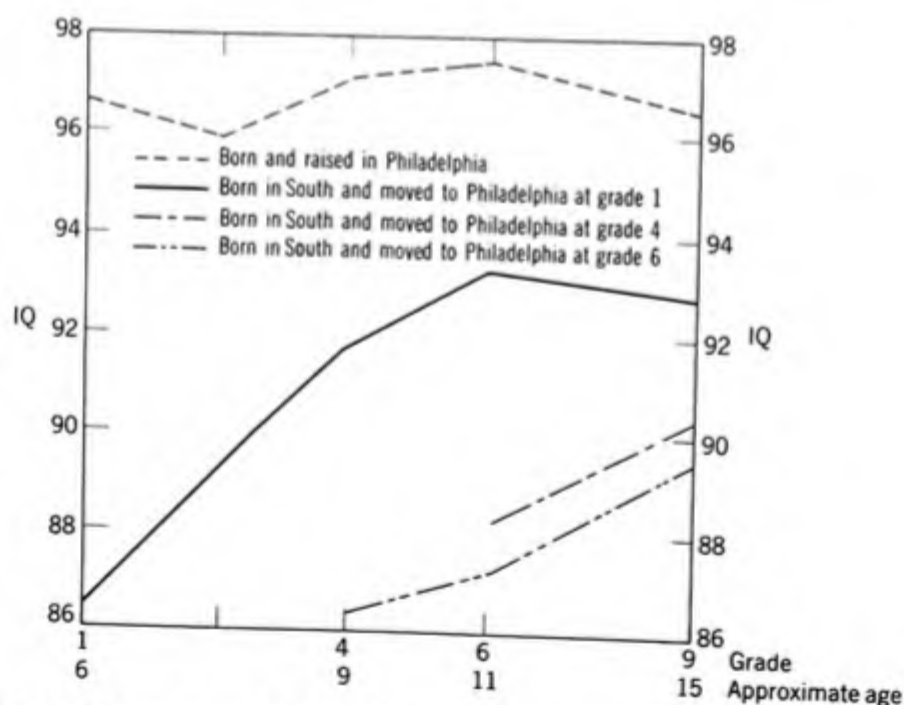


FIGURE 16-1. Changes in IQ for Negro students born and raised in Philadelphia, as contrasted with those who came to Philadelphia when they were in the first, fourth, and sixth grades, respectively. (Bloom, 1964, after data by Lee, 1951.)

Southern states for the more stimulating, urban environment of Philadelphia. Children who arrived when they were first-graders started with a mean IQ of 86, but had attained a mean IQ of 93 by the ninth grade. Those who did not arrive in Philadelphia until they were in the fourth or sixth grade showed some improvement, but not as much as those who had arrived as first-graders or who were born in Philadelphia.

There are two important observations that we should make about lower-class IQs at this point. One is that they tend to decline with age during childhood, and the other is that they are not as good predictors of school success as they are for middle-class students. Let us consider these points in order.

Declines in IQ. In Chapter 3 we discussed the research of Hugh Gordon (1923) with canal boat and gypsy children in England. Both groups of children attended school only a few days a month and both showed declines in IQ. We pointed out that these declines did not mean that children were becoming less intelligent with each succeeding year, but rather that they were growing mentally at a slower rate than other children. Hence they were dropping farther and farther behind with each succeeding year. Their *relative* position in their age group dropped each year; hence their IQ showed a decline. The same thing happens to socially disadvantaged children in this country under usual conditions. A study by Robert L. Green and Louis J. Hofmann (1965) of Negro children in rural Virginia shows how their IQs drop with each succeeding age group. Although socially disadvantaged, these children had the benefit of some schooling. A second group that was unable to attend school showed somewhat less overall decline in IQ, but the IQs were markedly lower (see Figure 16-2).

Mental growth that lags behind the norm is accompanied by lags in school performance. In other words, the child whose IQ is declining year after year tends to fall further and further behind in his school work. Let us take reading as an example, for intelligence-test scores are highly correlated with reading-test scores. A child who has an IQ of 90 in the first grade has, shall we say, an IQ of 82 in the third grade. By now he is reading at the second-grade level. When he is in the sixth grade, he has an IQ of 74 and is reading at the third-grade level. In three years he has progressed one grade in reading ability. He has gone ahead, but at only one half the rate of the average school child.

Correlations between IQ and School Performance. The second point, that intelligence tests are not as good predictors for lower-class than for middle-class children, is illustrated by research conducted by Beeman H. Phillips (1962), who studied the relationships among social class, anxiety, intelligence as indicated by IQ, and achievement as measured by both school marks and scores on standardized tests. Phillips' study included some 1500 seventh-

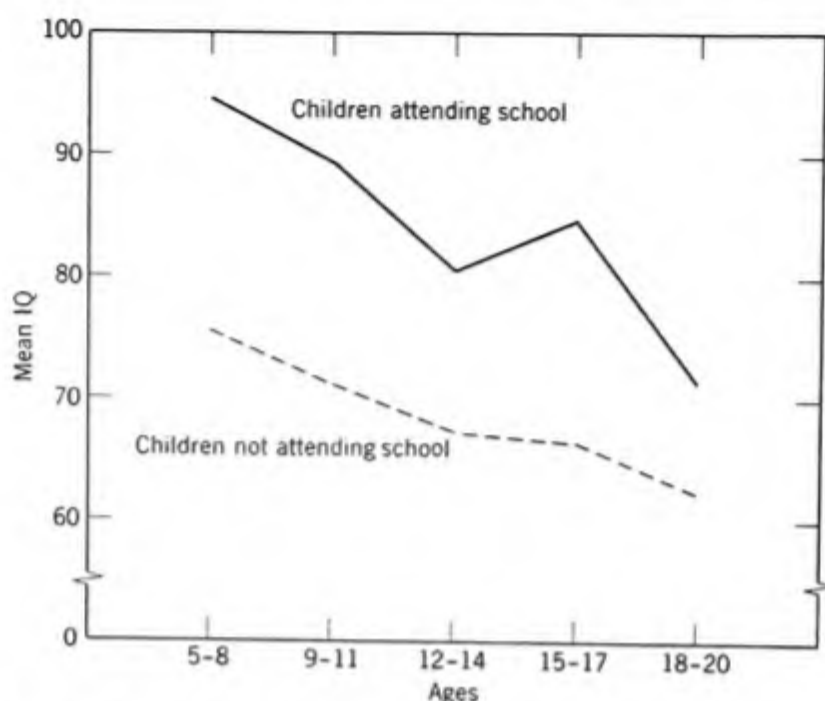


FIGURE 16-2. Declines in IQ with age for two groups of socially disadvantaged Negro children and youth in Prince Edward County, Virginia. One group was educated elsewhere during a four-year period during which public schools did not operate, and the other group received no schooling. (Green and Hofmann, 1965.)

graders in four Texas communities. As Table 16-1 shows, he found that the IQ of lower-class children correlated consistently lower with teachers' marks than did the IQ of higher-class children. The fact that for lower-class students correlations between IQ and achievement-test scores were higher than correlations between IQ and teacher marks suggest, for one thing, that bright lower-class students who were actually doing a rather good job of learning were less likely to be recognized or rewarded by their teachers as were higher-class students. It may well be that teacher bias against lower-class behavior, appearance, or attitudes operated here. Or it may be that bright lower-class children were less able or willing to engage in the type of highly socialized behavior that results in successful grade-getting. Perhaps both of these possibilities are involved. It is significant that anxiety seemed to "sharpen" the relationship between IQ and achievement (both grades and test scores) for lower-class boys. This means that anxiety probably improved the performance for brighter lower-class boys and worsened it for duller ones. It is very likely that anxious, bright lower-class boys tried harder to please their teachers and to get good scores on achievement tests. Anxiety, as we have pointed out previously, can facilitate learning, as well as inhibit it.

TABLE 16-1. Correlations* of IQ with Grades and Achievement-Test Scores for 1500 Seventh-Graders in Four Texas Communities, Classified as to Sex, Social Class, and Anxiety (Phillips, 1962)

Achievement Variables	Males				Females			
	High Social Class		Low Social Class		High Social Class		Low Social Class	
	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety	High Anxiety	Low Anxiety
Teacher grades								
Social studies	54	57	29	29	42	37	35	33
Mathematics	66	60	36	21	29	32	36	36
Language arts	54	58	30	24	40	38	34	30
Standardized tests								
STEP Social Studies	56	63	60	47	49	57	53	56
CAT Mathematics	69	61	50	34	45	43	43	51
CAT Language Arts	70	63	59	53	41	51	49	52
CAT Reading	70	63	63	51	55	66	52	63
STEP Science	50	57	51	38	49	53	44	47
Number	55	99	108	103	58	94	158	84

* Decimal points have been omitted from correlations.

Robert Lee Green and William W. Farquhar (1965) obtained similar results when they computed correlations between verbal intelligence-test scores and grades for Negro and white eleventh-graders in Detroit high schools. Intelligence-test results correlated $-.01$ with grades for Negro boys, and $.25$ for Negro girls, in contrast with $.62$ for white boys and $.21$ for white girls. On the other hand, tests of achievement motivation (n Ach) correlated $.37$ and $.55$ with grades for Negro students and $.50$ and $.43$ for white students, thus indicating that n Ach was better than intelligence tests as a predictor of academic success for Negro students.

Experiences of Negro Children. One interpretation of these differences lies in the different experiences Negro and white children have during childhood. The attitudes of Negro children toward themselves and toward school are, for example, more likely to be affected by their being targets of race prejudice. They also have other problems that harass them. The study by Deutsch and Brown (1964), cited earlier in this chapter, showed that fathers of Negro children were more likely to be absent from the home than was true of white children in the same social-class grouping. Furthermore, decades and centuries of being thought inferior, and consequently thinking of oneself as inferior,

are bound to have some effect on attitudes, work habits, and willingness to compete academically. It should be noted that there is no sound evidence to show that there are any differences in mental functioning between races that cannot be explained in terms of environmental factors. For example, a study by Ira J. Semler and Ira Iscoe (1963) contains findings that are typical. They found differences between Negro and white children aged five in their ability to accomplish a learning task, but this difference could be accounted for in terms of the extent to which white children's environment had been enriched and the Negro children's environment had not. The white children, for example, had access to kindergartens, but the Negro children did not. At the age of nine, however, when both sets of children had participated in schools that were both comparable and adequate, the differences in learning ability had disappeared.

Personal Relationships with Teachers. Throughout the studies comparing middle-class with lower-class school performance, the personal relationship between pupil and teacher has loomed large. The lower-class student, as we have pointed out, is less likely to react positively to ego rewards and more likely to respond to direct and immediate reinforcement. He will work hard for teachers who are supportive and who show their interest in him, but will become apathetic or even hostile in classes where teachers are cold, discipline-oriented, or interested solely in the cognitive aspects of learning. The importance of the personal relationship is brought out by a study by David Gottlieb (1962), who asked college freshmen with lower-class backgrounds to tell him how they happened to enter college. These young men were much more likely to mention the influence of teachers and counselors than were freshmen with higher socioeconomic status. Like the other studies that we have cited in this chapter, Gottlieb's research provides us with one more clue to the way in which children from culturally and socially deprived environments can be helped to progress.

TASKS FOR REMEDIAL PROGRAMS

Preparation for Free Choices. It may be well at this point to review some of the things a remedial program of education must accomplish if it is to prepare socially disadvantaged children for the kinds of tasks they will face in school and in employment situations. In doing this we are not solely concerned with trying to mold children in order to fit them into a predetermined role in rigid and unyielding situations. For one thing, most schools and most employment situations today do permit a considerable degree of choice and freedom for self-determination. Most schools provide a variety of programs

and a rich array of experiences; similarly, there is an infinite number of possibilities in employment. For another, preparing a child to be successful in school means giving him a chance to find himself. The difficulty with life in deprived circumstances is that the individual has few choices for self-expression and self-determination. The educated person has many more options as to what he can learn, what he can work at, or what he can do with his leisure time. Preparing a child to benefit from education means preparing him to learn how to be free, in the broadest sense of the word.

Building Ego Strength. In order to bring a lower-class child to the point where he can derive as much benefit from the schools as a middle-class child, we must help him develop self-confidence and ego strength. Ego strength is characteristic of a child who "seems to act on a fairly good estimate of reality, who exercises good self-control, who is able to stick with a task, and who can use spontaneous imagination" (Wattenberg and Clifford, 1964). The socially disadvantaged child rates low on these qualities. Growing up in a restricted environment, he is unaware of the social reality of the larger society outside the slum; he is likely to be highly distractible, hence he cannot "follow through" on frustrating and tedious tasks; and neither self-control nor imagination is a prized quality in his social environment. Lower-class children, particularly girls, are oppressed by strong feelings of inferiority that lead them to approach learning tasks with premonitions of failure.

These inferiority feelings are further aggravated by a feeling of being alienated from the main stream of society. As we have noted in various contexts, the lower-class child feels like an outsider in school. Not only is he likely to be a slow learner and earn poorer grades, but he tends to be ignored by other students, who turn to middle-class children for their leadership.

We have also noted that the lower-class child's poor start in school is due in large measure to a home environment in which he receives less adult attention than the typical middle-class child, an environment that is more likely to be disorganized and unpredictable and in which the emphasis is on good behavior and keeping out of trouble, rather than on achievement and accomplishment.

Attitudes of Teachers in Remedial Programs. In order to help the socially disadvantaged child compensate for the shortcomings that we have listed, a remedial program must be staffed by warm, understanding, and accepting adults, and not by persons who are shocked, disgusted, or afraid of lower-class people and their behavior. Programs have their best chances for success if they begin during the child's early years, partly because the evidence is incontrovertible that preschool experience improves children's chances for school success, and partly because of the need to have lower-

class children begin the first grade on a more equal footing with middle-class children. We have pointed out that many children who are behind in the first grade build up an increasing lag as they go through school.

Remedial programs should concentrate on children's attitudes, values, and interests, as well as on skills that are more obviously identified with school success. In other words, it is as important for deprived children to learn to become interested in achieving as it is for them to learn how to use crayons and pencils and how to handle books. These skills are important, of course, but attitudes are more basic. Middle-class teachers tend to think of paper, crayons, and books as intrinsically interesting materials. They certainly are to middle-class children, who see in them opportunities for self-entertainment, but they may appear quite different to a child from deprived surroundings, who is more interested in finding an adult whom he can hug and who will hug him back.

One of the most significant contributions that adults who staff remedial programs can make to the culturally deprived child is that of treating him like an individual, showing an interest in *his* needs, *his* interests, and *his* accomplishments. The area of personal development is not only one in which homes in deprived conditions are most deficient, but it is also one in which a remedial program can make the most significant contribution. Without some individual attention, the child may lack the incentive or interest to develop the ego strength that he will need to undertake the more frustrating, trying, but nevertheless rewarding tasks of school learning.

THE EARLY TRAINING PROJECT AT GEORGE PEABODY COLLEGE

Background. If first reports are any indication, one of the most successful of the remedial programs for culturally and socially deprived children is the Early Training Project (ETP) developed under the direction of Susan W. Gray and Rupert A. Klaus (1965a,b) of the George Peabody College for Teachers in Nashville, Tennessee, under grants of funds from the National Institutes of Mental Health and the National Institute of Child Health and Human Development. Its success is due in large measure to the fact that it satisfies all the criteria that we have listed in the foregoing paragraphs.

The ETP is both an experiment designed to determine whether certain procedures could offset the progressive retardation that many deprived children display during their school years, and is also a demonstration project for the purpose of developing techniques that can be used in other kinds of enrichment programs. The children who took part in the ETP came from

culturally disadvantaged Negro families living in a town of 25,000 population located in Tennessee. The mean number of children per family was five; fathers were absent in 40 per cent of the homes; most of the fathers who were present held unskilled or semiskilled jobs. Two experimental and two control groups were drawn from children born in 1958 who showed the most extreme cultural deprivation. One experimental group received the special enrichment program beginning in May 1962, and the other was started in May 1963. The first control group did not, of course, participate in the enrichment program, although these children had a special recreation program the summer before they entered the first grade. The second control group was comparable to the other three groups, but was located in a city sixty miles away.

Reinforcement of Learning Experiences. The first experimental group participated in three special summer school experiences of ten weeks each, supplemented by weekly home visits during the rest of the year. The second experimental group received the same treatment, except that it was started a year later. The program was deliberately designed along operant conditioning principles (see Chapter 8) to provide the kind of reinforcement that would reorient children's approach to learning and problem situations. The program of reinforcement was ordered as follows:

1. Each child was to receive more reinforcement than he would at home. Parents in culturally deprived families tend to be preoccupied with household tasks and other problems and give their children little individual attention, unless their behavior is causing a problem. They are more concerned with *coping* with their children's behavior than with forming or shaping it.

2. The source of the reinforcement was to be an adult, where possible. Because culturally deprived children have relatively little interaction with their parents, such reinforcement as they experience is likely to come from their siblings and peers, or from inanimate objects—playthings, for instance.

3. Much of the reinforcement was to be verbal, inasmuch as the culturally deprived child is likely to receive little reinforcement of this type at home, and this type of reinforcement is important in his social development.

4. The reinforcement was to be directed at getting children to explore, experiment, and try things. Such reinforcement as he is likely to get at home is directed toward inhibition—that is, toward getting him to stay out of trouble and be quiet.

5. Reinforcement was to be focused on specific aspects of the child's performance, so that he would know what was expected of him. Such reinforcement as there is in culturally deprived homes tends to be very general, such

Problems of the Socially Disadvantaged Learner

as, "You're a bad boy" or "You're a fine girl," which does not give the child any clues to what he should do or not do.

Each experimental group of twenty children had a head teacher, with one assistant for every five children. The staff was evenly divided according to sex and race. The high ratio of adults to children was necessary in view of the extensive and intensive reinforcement that the ETP called for. The reinforcement was direct, immediate, and physical at first, consisting of hugs, pats, being carried, candy, cookies, and gifts of plastic toys. As the program continued, the staff shifted to rewards of a more symbolic nature, such as gold stars and having one's name posted on the blackboard. The reinforcement was specific at first, that is, it helped the child to focus on some particular aspect of his behavior that was correct or incorrect. Children also received more reinforcement at first, because it was the task of the ETP staff to get them to interact with their environment, to take the initiative to try things. As time went on, reinforcement became more selective and was focused on activities that were just within the range of a child's ability, and on the kinds of behavior that have a high rate of payoff in school, such as looking for and finding new relationships between objects and events, persisting with difficult tasks, or wanting to redo a task (a drawing, for



"I don't want an A, I want 25 cents like Dad gives me."

Landin, *CTA Journal*. (Reproduced by permission.)

One of the tasks of the school is to get students to learn in response to ego and social rewards and to wean them away from direct, tangible rewards, such as money, candy, and pats on the head.

example) that the child felt was not quite right. Although reinforcement was prompt and immediate at first, it became more and more delayed as time went on, inasmuch as delayed reinforcement is more the norm in the school situation. Rewards, too, were shifted from the direct and physical to the abstract and symbolic, and finally to "bookish" objects and activities, such as drawing paper, crayons, books themselves, and records. Gray and her co-workers have this to say about their policies:

In general terms one should keep in mind that an interested reinforcing adult has tremendous impact on young children, particularly deprived children, who have received inadequate rewards from adults. This means that in general teachers and other workers with young children will have tremendous power in shaping a child's efforts and activities. Thus one can couple one's social approval of a physical sort with verbal social approval, and also later with more abstract and delayed rewards. As an example, one may find as the months go by that such token rewards as gold stars, little trinkets, or colored seals will come in the child's view to stand for a measure of the adult's approval of his activities.

The next step from such "abstract" and symbolic rewards is that of the child's internalizing his own reward systems, of building up his own standards of performance. One can hardly hope to have preschool children do much internalizing. It can be helped, however, by encouraging the child to set his own standards, to evaluate his own performance, or by such simple techniques as trying to arouse a child's pride in his activities—"Aren't you proud that you painted such a good picture!" and the like.

Developing n Ach. In respect to the last point, one of the chief objectives of the ETP was that of developing the child's need for achievement (n Ach). Movement toward this goal had its pitfalls. When deprived children are given adult approval and affection, they tend to respond to it dramatically. Close relationships developed between the children and members of the staff, but it was necessary for the latter to keep in mind that these bonds had to be severed at the end of the summer and that children had to be helped to become independently self-reinforcing, to enable them to find satisfactions and reinforcements elsewhere. Games provided many opportunities for staff members to encourage children to better their performances away from the ETP. They could ask, for example, "Did you bounce the ball more times at home last night, Joe, than you did here at school?"

Achievement was encouraged at first whenever a child performed simple tasks adequately—for example, when he found his own towel and returned it to its proper hook after he had used it. Later, reinforcement was reserved for the successful completion of more complex tasks. The staff made deliberate attempts to indicate that they were interested in achievement. For ex-



Ken Heyman

Children in a North Carolina Head Start Program become aware of a new world.

ample, the stories they read to the children were not only those in which children could identify with key characters, but they also involved the achievement of goals in spite of difficulties. Children were encouraged to work for several days over things, like booklets, that could be taken home as tangible evidence of their success. There was also a booklet for each child that was used to record his progress. Such booklets became the focus for small-group discussions concerned with evaluation that dealt with questions such as, "What has Helen learned this week? What will she learn next week?"

Delay of Gratification and Reinforcement. The researchers were well aware that only those children who are willing and able to delay gratification can succeed in school. Deprived children are unable to respond favorably to situations in which gratification is delayed. Hence the staff addressed themselves to the problem of helping children develop the ability to work for a delayed reward. Their planning proceeded along these lines:

1. In order to be willing to work under delayed-reward conditions, children must be able to trust adults. Hence teachers never promised rewards they could not give.

2. Children were given many opportunities to choose between immediate and delayed rewards. At first, the delay was not great, perhaps an hour. At the end of the program, they were expected to accept a delay of several days.

3. Children observed the consequences of delayed rewards. In a situation in which children were given the choice between one stick of candy immediately or two sticks when they finished the task, those who elected the immediate reward got to see the child who had chosen to delay receive his two sticks of candy.

4. A child who elected to delay rewards was reinforced immediately by social approval, so that both he and the other children were made aware of the significance of his decision.

Learning to Persist. Another problem that troubles deprived children in school is their inability to persist with difficult, frustrating tasks. Persistence is not the same as perseveration—the repetition of behavior that has no particular aim in view. The staff began with simple physical tasks, such as throwing a ball into a wastebasket. Some children could succeed in this task even though they stood six feet away; others had to stand two feet away to be successful. After the staff member had determined what the child's normal performance was, he encouraged him to try to get the ball into the basket from a point just beyond the distance at which he was successful. He was kept at this task for a short period of time and received much adult approval for merely trying. Whenever he was successful, both the adult and the other children roundly cheered. The comments of the authors are relevant here:

If one looks at the probable environment of young deprived children, one characteristic of it is surely that persistence has not paid off. That is, the environment is disorganized sufficiently both spatially and also from the standpoint of time schedules that the child has difficulty in learning sequences of events or consequences of his acts. One characteristic approach of persons in deprived homes, from children to elderly people, seems to be an apathy that grows in part out of a feeling, often realistic, that the individual can achieve very little by his own efforts. He sees himself as being shaped by the environment rather than by being able himself to make changes in that environment.

In practical terms, this means that when one wants to promote persistence toward a goal in young deprived children, one must think in terms of having a clear and orderly environment in that it is highly predictable, one in which the child can see the consequences of his acts, and one in which the situation is so arranged that persisting toward a goal is followed by attaining the goal often enough that the child learns that putting forth effort is likely to be rewarded.

Problems of the Socially Disadvantaged Learner

The "hidden curriculum" in middle-class homes we have mentioned previously prepares children from such homes for successful participation in school activities. Culturally deprived children, on the contrary, do not have experiences in using paper, looking at books, counting, and the like. In the early phases of the ETP, children were given crayons and told to mark on the paper. Then they were shown how to hold crayons for drawing. When staff members looked at picture books with a child, they encouraged him to turn the pages. Each child's progress book was also used to record his learning of school-related tasks. There were squares, for example, that children could color in each color he could name, and squares that could be checked for each number he could count in sequence.

Follow-up with Mothers. Another feature of the ETP was its program of follow-up work with parents. After all, the children spent only a few hours of each day and a few weeks of each year in school. Most of their



Audio-Visual Services, Alameda County Schools

Programs for socially disadvantaged children have their best chance for success if they can involve the parents in some way. These parents are taking courses for self-improvement at an adult school.

growing lives were spent at home. This part of the ETP was carried out by a former preschool teacher who had had training in sociology and social work. Her weekly contacts with parents throughout the year were aimed at three objectives: (1) providing some kind of a bridge for children between one summer session and the next (this involved bringing school materials to the mothers and showing them how to use them); (2) giving mothers information on how school success is related to occupational success; and (3) trying to promote greater feelings of personal worth in mothers, and, correspondingly, a greater regard for the personal worth of the children. Every month the visitor brought a copy of *Ebony* magazine to each of the homes and went through it with the mothers, pointing out articles and pictures related to the successful accomplishments of Negroes, particularly those not involved with entertainment and sports. Some of the mothers were actually quite timid about reading stories to their children, and the visitor helped them overcome this emotional block by role playing, in which the visitor played the role of the mother and the mother played the role of the child. The visitor pointed out to mothers that they were, in effect, the first teachers of their children and that they had at their command many things they could teach the child. Visits were also supplemented by monthly newsletters which carried news of the ETP's activities and always included a brief item for mothers to read to their children.

Results. Results of the experiment were quite encouraging. The first experimental group had a mean IQ of 86 at the beginning of the study when the children were four years old. Two years later, when the children were ready to begin the first grade, the mean IQ was 95. The second experimental group, which was started a year later, had a mean IQ of 92 at the beginning, and gained 5 IQ points for a mean of 96. The IQ of the local control group, which did not participate in the ETP, fluctuated between 83 and 91, during the period of the study, and the control group in the city sixty miles away fluctuated between 81 and 89 points during the same period. Differences in mental growth between the first experimental group and the control group located out of town are shown in Figure 16-3. The amount of growth is expressed in terms of months of mental age, and the amount of growth expected at 100 IQ (normal) is indicated by the light dotted lines. The heavy dotted lines show the amount of (retarded) growth that would have been expected if the experimental group had maintained its original IQ (86) and the control group had maintained its original IQ (88). The heavy lines (actual growth) show that the experimental group gained more than would have been expected under either condition (normal growth at the rate of IQ 100 or retarded growth at the rate of IQ 86), whereas the control group

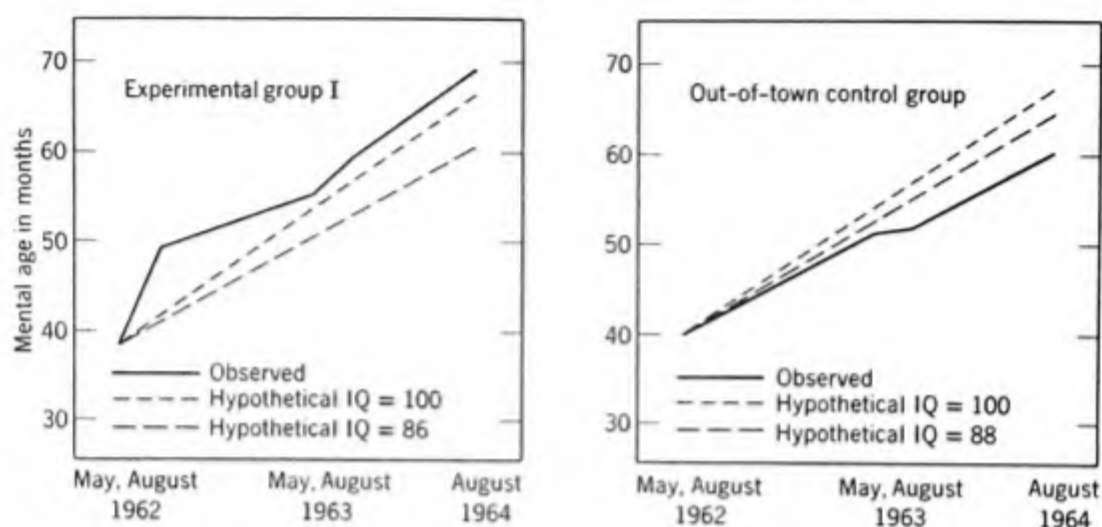


FIGURE 16-3. Differences in intellectual growth between a group of children who received special enrichment for three summers and two winters (Experimental group I) and a group who did not receive such treatment (Out-of-town control group). (Gray and Klaus, 1965a.)

gained less than would have been expected under either condition (normal growth at the rate of IQ 100 or retarded growth at the rate of IQ 88).

The general conclusion that we can reach, as a result of this study, is that it is possible, with the use of imaginative, aggressive, carefully planned, and well-staffed programs to forestall the decline in IQ and achievement that is so characteristic of deprived children during the school years, and instead set them on a course of intellectual growth and development that will enable them to participate in and to benefit from normal school programs.

The Need for Careful Planning. It takes more than enthusiasm and hard work to produce a successful enrichment program for deprived children. Gray's program was successful because it was carefully planned to take advantage of the motivational patterns children already had and because it made use of carefully selected, trained personnel with good supervision. Unfortunately, in the rush to get preschool enrichment started, some administrators do not plan or supervise so carefully. In one such program with socially disadvantaged Indian children in the Southwest, a teacher decided that she could control the children best by demonstrating skills and by having them participate in routines. When she tried to get the children to make piggy banks from plastic bottles and masks from paper bags, they stood around in bewilderment, and she had to end by doing the job for them. Very little learning took place in her classroom, as is indicated by the fact that at the end of six weeks, none of the children could recognize a

picture of a flag, although they had started each day with the pledge to the flag.

However, teachers who worked with other Indian children were able to discover ingenious ways of attracting and involving their attention. One teacher found that children would not listen to stories, so she tried the approach of sitting at a table and cutting figures out of construction paper. The children gathered around to watch. As each figure emerged from the paper, it took its part in the story she was telling. Another teacher saw that the children were entranced by the paper cutter, so she gathered a scissors, a can opener, a razor blade, and a knife. She then started a discussion by asking how these different objects were similar. Still another teacher found that her children were too shy to enter into planned activities, so she divided her class into "families" of six children each. Each family then picked a "mother" and a "father," who were inevitably the more mature, self-assured children. These "parents" then directed their "children" into activities that they previously had avoided (Zimmerman, 1965).

Programs for Older Students. There have been a number of programs that have attempted to compensate for the cultural deprivation of students in the higher elementary grades and in secondary schools. The Mobilization for Youth's Homework Helper Program hires high school sophomores and juniors from low-income families to tutor elementary students who are retarded in reading or arithmetic. Such a program aids in two ways: the elementary school children get special help with their studies, and the teenagers not only earn money, but have the experience of helping others and being valued for their skills and maturity. The Higher Horizons Project in New York City was developed for the purpose of identifying and encouraging talented teenagers. Children from deprived homes are, as we have noted, easily discouraged, and the school drop-out rate is high even with bright children. The New York schools used a number of different approaches to counteract these effects. The number of counselors was increased from one per 1500 students to one per 250; counselors were directed to interview students who were succeeding, as well as those who were failing; students were encouraged to read more books by such devices as making attractive paperbacks readily available; homework study rooms were staffed by college student volunteers; students were taken to concerts and theatres in an effort to provide cultural enrichment. The success of the program is indicated by the fact that the mean increase in IQ was 13 points. Approximately 40 per cent more students finished high school than had been the previous experience with comparable groups, and the number of graduates going on to college or some form of higher education increased by three and one half

Problems of the Socially Disadvantaged Learner

times. In fact, 91 per cent of those graduating in June 1961 went on to further education (Schreiber, 1962, 1963).

Other programs report very good success with only a minimum investment of time. Myron Woolman (1964) developed an approach that he called the Accelerated Progressive Choice Reading Program, or APCR, a specially programed technique designed to permit students to progress at their own rate of speed, incorporating materials oriented to the interests and values of socially disadvantaged youth and using a step-by-step procedure. One of the advantages of the program was that it required little teacher participation. After only forty hours of instruction, disadvantaged youth participating in Washington (D.C.) Action for Youth groups showed a mean gain of 1.28 years in reading ability. In another Washington program, Edith H. Grotberg (1965) found that teachers using an intensive remedial approach were able to help disadvantaged ninth-grade boys fourteen to seventeen years old raise



Sybil Shelton from Monkmeier

A volunteer tutor helps a socially disadvantaged youth with his lessons.

their reading level an average of 1.5 years with only thirty hours of instruction.

One of the problems with enrichment programs planned for adolescents is that it usually takes a great deal more time and effort to bring about major changes at this age than it does during the preschool years. Attitudes and patterns of motivation are more likely to be set by this age and resistance to change is likely to be greater. On the other hand, the adolescent is also in a position to realize that his future is at stake, for if he can learn the skills that the program is trying to teach him, his chances for occupational success are immensely improved. In some programs this motivation is evidently sufficient to bring about the kinds of changes that are desired.

Another problem is that of evaluation. Few studies are as well planned or controlled as the one by Gray and Klaus (1965*a, b*) that we discussed at length. As a consequence, one often has to take the subjective evaluations of those in charge of the program on faith. Perhaps this point is not very important. Perhaps the important thing is that more and more ingenious and creative programs are being developed to help those children who have been so long ignored by our schools. But lessons learned from evaluation in other kinds of programs would suggest that learning will be more successful, and public support more easily obtained, if evidence can be systematically collected to show what kinds of differences enrichment programs make in the school progress of the children and youth who participate.

SUMMARY

In recent years there has been an increased interest in providing special educational programs for children who are socially "disadvantaged," who grow up to perpetuate the poverty of their home environments. Most of such children seem to be unable to take advantage of ordinary school programs. Many disadvantaged children come from a slum environment, an environment that is characterized by disorganization, unbridled hostility and destructiveness, and aimlessness. This type of environment produces a child who does not fit very well into a well-ordered, middle-class school. The lower-class child is less likely to have a father in the home; his parents are likely to be too preoccupied with many pressing problems to give him much attention; he is less likely to attend preschool. Whereas the middle-class child responds to social reinforcement and generally learns to be self-reinforcing in his approach to learning, the child from a deprived environment is more likely to respond only to direct and immediate reinforcement. The

need for affiliation (n Aff) is likely to be stronger than the need for achievement (n Ach) for a socially disadvantaged child. This means that he is less responsive to opportunities he encounters in the school that lead to self-improvement and progress. Lower-class parents are also likely to value a child's good behavior higher than his achievement.

Benjamin S. Bloom (1964) says that the difference between a culturally deprived and an enriched environment is 20 IQ points. Environmental factors that affect IQ are likely to have their greatest impact during the pre-school years. The mental growth of children who transfer from a disadvantaged to an enriched environment is ordinarily accelerated, but if this transfer takes place later in childhood, there is less likelihood that they will reach the norm for their age. The retarded mental growth of deprived children shows up in such phenomena as IQ decline and dropping further and further behind in achievement levels. IQ is not as highly correlated with teachers' marks for lower-class as for middle-class students, although correlations run higher for the more anxious lower-class students.

Programs designed to remedy deficiencies in the cultural and social environment of disadvantaged children can succeed only if they are able to build up children's ego strength and help them develop certain task-oriented attitudes. This can best be accomplished if adults who staff the program are warm, accepting people, who are able to give children the kind of attention that they have lacked at home and thus guide them into developing the attitudes, values, and interests that will stand them in good stead at school. Such programs have their best chance for success if they concentrate on the preschool years, in order to start disadvantaged children off on a level comparable to that of middle-class children.

The Early Training Project conducted under the direction of Susan W. Gray and Rupert A. Klaus of George Peabody College appears to satisfy all these criteria. Two experimental groups aged four and five, respectively, participated in intensive summer programs in which they received a great deal of adult attention. Reinforcement was immediate and physical at first, but toward the end of the program children had learned to respond to reinforcement that was verbal, social, symbolic, and delayed. They learned to take pride in their work and to develop need for achievement. This involved their learning habits of persistence when faced by frustrating tasks or distractions. Records were kept of children's progress in a form that they themselves could interpret. A teacher-social worker visited the homes of the children weekly during the entire year, partly to create a "bridge" between the summer sessions, and partly to interest the parents in participating in

their children's intellectual development. Intelligence-test scores of the experimental groups showed IQ gains over the period of the study, whereas control groups showed losses.

There are a number of other enrichment programs that have been tried. Some are successful and some are not, although evaluative evidence is often lacking. Not all are as well planned and supervised as that of Gray and Klaus. Programs for teenagers have a number of handicaps, because attitudes are well set by the teen years. Nevertheless, some well-planned programs have produced gains in achievement.

SUGGESTED PROBLEMS

1. What are some of the things teachers can do with disadvantaged children in the primary grades in order to help them develop the kinds of attitudes and skills that are needed for school success?
2. If you were a principal of a junior high school in a slum area, what kinds of innovations would you introduce in order to help compensate for the disadvantages your students have?
3. Why should kindergartens and nursery schools in deprived areas have higher adult-child ratios (more adults to fewer children) than schools in middle-class areas?
4. Most kindergarten teachers like to have well-organized schedules for each day's activity. In what way might this interfere with the success of a program designed to compensate for social and cultural deprivation?
5. Some staff members of compensatory programs complain that parents do not want to talk with them about their children. Why do you suppose this occurs?
6. Let us say that you are teaching English to an eighth grade located in a slum school. Although you know how important it is for children to learn to write, you cannot get your class to write more than a couple of sentences at a time. Most of them give up after they have spent three minutes or so on the task. Why do they have this problem, and what can you do about it?

SUGGESTED READINGS

- Beck, J. M., and Saxe, R. W., eds., *Teaching the culturally disadvantaged pupil*. Springfield, Ill.: Charles C. Thomas, 1965. Analyzes problems of the socially disadvantaged learner, presents descriptions of teaching procedures, and discusses teacher preparation and roles for the community and for school principals.

Problems of the Socially Disadvantaged Learner

- Bloom, B. S., Davis, A., and Hess, R., *Compensatory education for cultural deprivation*. New York: Holt, Rinehart, and Winston, 1965. A paperback report of a conference on education and cultural deprivation.
- Gray, S. W., Klaus, R., Miller, J. O., and Forrester, B. J., *The early training project: a handbook of aims and activities*. Nashville, Tenn.: George Peabody College for Teachers, 1965. A clearly written, readable manual describing the special project mentioned in this chapter, with descriptions of how the experimenters solved the problems they encountered.
- Jewett, A., Mersand, J., and Gunderson, D. V., eds., *Improving English skills for culturally different youth in large cities*. Washington: U.S. Office of Education, 1964. Excerpts of talks given at a three-day conference held by the U.S. Office of Education in 1962. Discusses the background of culturally disadvantaged youth and describes remedial programs.
- Kerber, A., and Bommarito, B., eds., *The schools and the urban crisis*. New York: Holt, Rinehart, and Winston, 1965. A paperback selection of readings with particular emphasis on disadvantaged youth.
- Landes, R., *Culture in American education*. New York: Wiley, 1965. An anthropologist's account of a program developed to train teachers to meet the needs of Mexican and Negro students in California schools.
- Riessman, F., *The culturally deprived child*. New York: Harper, 1962. The definitive text to date on this subject.
- The December, 1965 issue of the *Review of Educational Research* (Vol. 35, No. 5) is devoted to the topic, "Education for culturally disadvantaged children." See particularly the list of publications at the end of the final chapter, "Programs and practices in compensatory education for disadvantaged children."

17 Guidance Services— Individualized Help for the Learner



Lew Merriam from Monkmeier

Problems of Mass Education. With all its faults, mass education, as exemplified by modern educational systems, has produced immense benefits for all mankind. For one thing, it makes available to virtually everyone within reach of a school a common body of the skills and information that are essential for functioning in a civilized world. Furthermore, it puts within everyone's grasp the means for finding a place in the social order and for realizing his potentialities.

On the other hand, mass education has undeniable shortcomings. It does lend itself to the control of a few people at the top, particularly in those countries or communities where political power is the monopoly of an elite group. In such societies, well-organized school systems become all-too-convenient channels for political propaganda and provide only limited opportunities for mental growth. Even in the more democratic societies systems of mass education tend to produce a kind of educational bureaucracy that acts to prevent educational change and restricts the freedom of the classroom teacher. Such weaknesses are not due so much to any basic flaw in the idea of organized mass education, as they are due to apathy, ineptitude, or a lack of understanding of educational goals and processes on the part of the citizenry. What we are concerned about in this chapter, however, is still another kind of deficiency: the danger, and even the probability, that some very important educational needs will go unmet in even the most efficiently organized system of mass education.

The Need for Individualized Education. There are, for example, the needs of the children whom we have described in the last two chapters—children who need special help because they have special problems. These problems cannot be handled easily and successfully on a mass basis. To be sure, we can organize special programs for groups of children who are socially disadvantaged, hard-of-hearing, or mentally retarded, but such group

treatment is only a partial solution to the problem. At some point, we must intervene as individuals and work with students as individuals. As we noted in the preceding chapter, most culturally deprived children must be given individual attention, because they, unlike middle-class children, are relatively unable to respond to social reinforcement and ego rewards. Hard-of-hearing and mentally retarded children not only need a great deal of personal care on the part of teachers, but specialized professional people, such as physicians and psychologists, must give them individual diagnostic attention as well.

The way in which a hard-of-hearing child gets into the special program is an example. Perhaps the teacher is the first person to spot him. He notices that the child does not understand his assignments correctly; he raises questions that are irrelevant; he is continually asking people to repeat what they say; at times he appears to be concentrating on a task and is unaware that someone is speaking to him. As the teacher notes these symptoms, he is not reacting as a mass educator, as someone who is concerned only with classes and groups. He is responding to the needs of an individual child. As a next step, he may refer the child to the school nurse, who satisfies herself that the child needs a hearing test. She may then refer him to the school physician and consult with the parents. If it is decided to assign the child to a special class, several other people—administrators, supervisors, special teachers, psychologists, audiologists—may be involved, each dealing with the problem of an individual child. This is not mass education; this is individualized education. In a system that operated only on a mass-education basis, the problems of the individual child would be ignored or would be handled administratively in accordance with policies for whatever classification the child might fall into.

The kind of child that we discussed in the preceding two chapters is one who needs *continual* or *frequent* special attention, and there is every reason why we might want to individualize education on his behalf. His needs for special treatment are dramatic and urgent; when we try to meet them through the methods of mass education, it just does not work. His slowness in learning and the continual problems this creates remind us that we are not meeting the needs of this child. Hence we make special provisions for satisfying them.

The fact that we make special arrangements for the exceptional or the disadvantaged child does not mean, however, that the needs of the rest of the student population can be met by the procedures and provisions of mass education alone. Every student needs some special and individualized attention at some time or other during his educational career. Some need it at

frequent intervals, others need it less often, but everyone needs it on occasion. Sometimes this help is needed for a special problem that has arisen, such as an illness that has taken a student out of school for several weeks. Sometimes a student needs to talk to someone about a personal problem that is causing so much anxiety that his ability to learn is momentarily impaired. And sometimes what is needed is merely some kind of personal attention, which should remind us that the need for attention is a basic psychological need that must be satisfied if the human organism is to develop and mature normally. The fact that a system of mass education is operating efficiently should not blind us to the fact that whatever learning the individual student accomplishes under ordinary classroom conditions can be increased by giving him a little personal attention. Some of this special help and attention can be given by teachers in the classroom during the instructional period; some of it can be given by teachers during free periods, after school, or at other odd times. But much of it can be provided more efficiently and effectively by persons who are specialists: persons who are referred to as student personnel workers or guidance workers.

The School Counselor. The school counselor is perhaps the least specialized of the several kinds of guidance workers. Most counselors are teachers or former teachers who have a strong interest in working with students on a person-to-person basis and who have developed some special skills in interviewing and testing. There is a growing trend to require teachers to take professional training in counseling and guidance before being appointed to counselor positions. Some states prescribe special credentials for counselors.

A generation or so ago counselors were inclined to specialize in problems of vocational choice—helping adolescents select their life work and advising them about appropriate courses. Inevitably, vocational counseling came to include educational counseling as well, because students changed their minds about their decisions or failed in their courses and had to be readvised or had to be helped to make decisions when two required courses came at the same hour of the day. Inevitably, too, counselors became involved with problems of personal and social adjustment. The necessity of making an occupational choice often arouses confusion and anxiety; sometimes parents and children disagree as to which career should be followed; and the ability of a student to succeed in the course of his choice depends, in part, on his attitudes, his motivation, and his ability to make progress in spite of the frustrations and distractions of everyday life.

Hence there is and has been a tendency for counselors to render services that cover a widening sector of the lives of the students whom they counsel. In many schools they have come to be key people in helping the individual

student to adjust to the school program and in adapting the school program to the needs of the individual student.

The School Psychologist. The role of the school psychologist is closely related to that of the counselor in that both the counselor and the psychologist help individual students with their problems. However, there are some important differences and distinctions. Most counselors are educators with some additional training in psychology, whereas a great many (although by no means all) school psychologists are primarily psychologists who have some additional training in dealing with school problems. A master's degree in psychology is usually considered to be minimum training for a school psychologist, and many secure a Ph.D or Ed.D as well. School psychologists have in the past tended to spend their time working with children of elementary school age, whereas most counselors are in secondary schools. As a consequence, school psychologists are less involved in helping children with problems of vocational choice and more concerned with learning difficulties and emotional problems. School counselors are members of the teaching or the administrative staff of the school where they work; most of them teach some classes. School psychologists very seldom teach classes. Furthermore, they either work in a clinic or serve schools on an itinerant basis. This is partly because they need special equipment and facilities that are best kept separate from the hustle and bustle of school buildings and partly because elementary schools have smaller enrollments than secondary schools and are unable to afford or may not require the services of a full-time psychologist.

There has been a trend in the last decade to expand the professional role of the school psychologist. It is now generally recognized, at least by the leadership of the profession, that it may be more economical to use school psychologists in the in-service education of teachers than on specific interactions with a single child or a single teacher. A number of school psychologists are also becoming involved in administration and research in programs concerned with disadvantaged, emotionally disturbed, or physically handicapped children. The training program for school psychologists at the George Peabody College for Teachers in Nashville, Tennessee, expects trainees to develop competence in a variety of areas: psychology of group behavior, mental hygiene, psychology of interpersonal relations, and educational and psychological research. Although the graduate of the George Peabody program may continue to function as a clinician to some degree, it is expected that his chief role will be that of helping teachers and administrators develop greater competence in dealing with the psychological problems that are bound to occur in any school. He is also expected to function

as a problem solver—a problem solver with special research skills that enable him “to find answers to problems as definitely and economically as possible” (Gray, 1959).

The School Social Worker. School social workers or visiting teachers usually work in guidance clinics or out of the central offices of school systems. Most social workers have received training in a graduate school of social work and have a master's degree in that field. They may provide counseling or psychotherapy for disturbed children or their parents in much the same way as the school or clinical psychologist, except that the giving of tests is primarily a responsibility of the psychologist. The social worker is also more likely to interview parents and to work with family service agencies, the juvenile court, and other community agencies and organizations.

In some states and in many communities, the work of the attendance officer is becoming recognized as a branch of child welfare, and training in social work is being recommended or required increasingly as preparation for this position. Attendance officers are often concerned with contacting parents and in maintaining liaison with the courts, although there is a great deal of counseling and referral that is carried on as a necessary function of the job. This is a far cry from the traditional role of the “hookey cop.”

Medical Specialists. Another role that is growing in importance is that of the psychiatrist. Psychiatrists are medical doctors who have received specialized training in the diagnosis and treatment of psychopathology. They are usually included in the guidance programs as part-time members of the psychological clinic staff, where they serve as consultants or as key members of psychiatric teams consisting of psychologists and social workers. A small portion of the children referred to a guidance clinic will be so seriously disturbed or so retarded mentally that placement in an institution is indicated. Inasmuch as the work of school psychologists and social workers involves problems of mental and physical health, the presence of a medical doctor on the staff of a clinic is highly desirable.

In actuality, there is a considerable overlap in the roles of counselor, school psychologist, school social worker, and psychiatrist. They all may deal with emotional problems, they may all make referrals, and they may all serve as consultants to teachers and administrative personnel. Here is a quotation from a paper written by Irving N. Berlin (1956), drawn from his experiences as a psychiatrist member of a consultation team:

At the beginning of the fourth year of school consultation, we met with a group of new teachers who were having difficulties with their classes. This ex-

periment was approached with caution by our team because we had learned our lesson about the difficulties involved in such group sessions. We thought we would try this because these teachers all had similar, acute problems and anxieties and it seemed the only way to reach more than one teacher at a time during a period of need. The teachers were surprised to find that there were others in the same predicament and as troubled as they. Most of them, after some initial hesitation, talked freely about their difficulties. They all seemed bewildered that the precepts taught in education courses and fairly easily carried out in their practice teaching seemed so ineffectual in their overcrowded classrooms, with many tense, overactive, disinterested, and rebellious children, many from minority groups and many in marginal economic circumstances. The team's concern with these teachers, and the team's verbalization of the kinds of feelings these new teachers might have seemed to help them talk more freely. During the meeting several teachers began to express the feeling that perhaps they expected too much of themselves—maybe they didn't need to love all their pupils. They all seemed easier as the team related experiences from our work with other teachers. Members of the team gave examples to illustrate that as teachers were able to be more direct and firm and less afraid that setting limits in the classroom would be "traumatic" to their pupils, they felt better, the children felt better, and more learning in a more agreeable classroom atmosphere occurred. After this meeting we heard that several new teachers on the verge of resigning their positions took a new lease on life and most of the group felt more relaxed and better able to handle their classroom situation.

There are other kinds of specialists who have important functions in the guidance program, although the amount and kind of participation varies from school to school and from community to community. The school nurse and the school physician often play key roles, particularly when it comes to making contacts with parents and making referrals to clinics. One great difficulty is to get parents to see that the behavior of a disturbed child is probably not something he will "grow out of" and that he needs psychological help. Parents can often accept such recommendations more easily from a school nurse, because she is a medical person, than from a teacher or principal.

Administrative Personnel. In some schools, the principal or his assistant provides such guidance services as are available. One disadvantage of this system is that these individuals are the same persons who are responsible for the enforcement of school regulations; hence it is difficult for them to establish the comfortable, permissive kind of relationship with boys and girls that is basic to good counseling. There are certain exceptions to this, of course. In some schools the assistant principal devotes himself entirely to counseling and guidance, and infractions of school regulations come under

the jurisdiction of the principal. In other schools, the principal or assistant principal just happens to be the kind of person who can convey the warmth, sympathy, and genuine interest in the problems that young people bring to him and thus is able to dispel some of the fear and anxiety that most students associate with a visit to the principal's office.

The chief function of the specialists whom we have described is that of giving help to individual students—help that could not be provided if schools operated completely on a mass-education basis. Although some needs can be met by teachers, a great many of them require the attention of the specialist. Let us see what some of these needs are, giving particular attention to the needs that all children are likely to have from time to time.

The Need for Special Instruction. The need for special instruction is perhaps the first that comes to the mind of most teachers.

Lucy cannot seem to understand what it means to "carry" a number when you add two or more columns of figures. Miss Brandon, her teacher, gives Lucy what time she can during the arithmetic period. If this does not suffice, she may ask her to stay after school or give her some special assignments. Ford Galvin, in the fifth grade, is at about the third-grade level in his reading ability. He is very worried about this deficiency and wants to do something about it. Mr. Marshall, his teacher, has asked the school librarian for a list of books that are fifth grade in interest level, but are at the third grade in vocabulary. There are two other children in the class who also read at Ford's level, and Mr. Marshall will give them an opportunity to read by themselves from their special list. Mr. Marshall is using the librarian in still another way. Frank and Rudolfo have shown a tendency to engage in horseplay and practical jokes during class period. Mr. Marshall is not sure whether this is preadolescent high spirits and rebelliousness or whether their disruptive behavior is symptomatic of deeper disturbances. While he is studying their problem, he wants to make some adjustment in the curriculum which will involve them more deeply in school work. Since both the boys are fascinated with airplanes, he has assigned them a project of finding out why airplanes can fly and reporting their findings to the class. So far this approach has worked very well. The librarian was able to supply the boys with books and pamphlets dealing with airplanes and they seem completely absorbed in their task.

Meeting the individualized needs of students for instruction, then, is chiefly a function of the classroom teacher's role. Teachers are limited in this respect only by their ability to diagnose special needs and the time they can devote to the giving of this help. Very often teachers can get assistance in special instructional problems of the kind just described by discussing their problems among themselves and by consulting with supervisors and administrators. Most teachers are aware of a need for more help than they can



National Education Association—Carl Purcell

Some of the most significant guidance that teachers give young people is unplanned and impromptu, such as this informal counseling in the hall after school.

readily give, which is one of the reasons why smaller classes are so important in meeting the needs of individual students. The larger the class, the less time the teacher can spend on special problems of learning.

Personal Problems. The second kind of need likely to be overlooked in a system geared entirely to provide mass education is what we might call the "personal need"—that is, the need stemming from personal problems. In some ways, these problems resemble those of the emotionally disturbed child that we discussed in the preceding chapter. But the difference here lies in the severity of the problem and the extent to which it dominates the life of the child. The learning capacity of a child in the "emotionally disturbed" category is continually threatened or impaired by the problems he must face in his everyday life. Only a few children in the average classroom will need continuing psychological help over a long period of time. On the other hand, virtually all children have to deal with psychological problems at some time or other. The very unpredictability of life is bound to cause some anxiety.

Most children learn how to cope with most of the recurring problems in their lives as a matter of course, as a part of growing up. However, every child (and every adult, too) must occasionally deal with problems that are temporarily more than he can easily handle. Some of the critical situations that produce problems are obvious—a new brother or sister is born, the family decides to move, Mother has to go to work, Father is called for military service, and so forth. These are the crises of everyday living. Children survive them, of course, and are perhaps stronger for having lived through them, but while they are in the process of adjusting to the demands that life makes on them, it is not surprising that they should become less attentive in class, unusually quarrelsome, quiet and withdrawn, or whatever their customary and individual mode of dealing with crisis and anxiety happens to be.

As a way of discussing the teacher's role in easing such problems, let us consider some of the problems of adjustment that are not so obvious and dramatic but that may seem crucial to the child.

Billy is genuinely upset because he has lost his eraser. Now there is nothing particularly serious about a second-grader losing his eraser, but Billy is so disturbed that he cannot concentrate on his number problems. Back of Billy's concern is the fact that this is the fifth eraser he has lost in two weeks. Erasers cost only a nickel, but his father got very angry when Billy asked him for the money for the one he just lost. He is troubled not only because he is afraid to go to his father and ask for another nickel, but because he also wonders what is *wrong* with him: Why *can't* he keep from losing erasers? Maybe he is *no good*.

When biology class started, Mrs. Desmond became aware that Charmaine was behaving in a very silly manner. To be sure, teenagers *are* awfully silly at times, but Charmaine was acting sillier than most. Furthermore, this wasn't like her. She was working with a couple of boys who were dissecting a frog and was making remarks that were supposed to be funny and giggling at them. The boys didn't seem to think they were very funny. A couple of the other groups looked up to see what was going on, so Mrs. Desmond moved across the laboratory toward Charmaine's table. Charmaine saw her out of the corner of her eye and quieted down. However, a minute later the giggles started again, so Mrs. Desmond decided that something must be done.

"Charmaine," she said, pleasantly, "will you give me a hand in the storeroom?"

Charmaine's face fell as she turned and walked toward the storeroom door, and Mrs. Desmond knew she had seen through the ruse.

The two of them said nothing while Mrs. Desmond stood on a ladder and put plaster models on the top shelf as Charmaine handed them to her. Then, when they were finished, Charmaine said, in a small voice: "I'll try to keep quiet now, Mrs. Desmond."

Educational Psychology in the Classroom

Mrs. Desmond did not answer her directly but asked: "Is there something bothering you, Charmaine?"

Charmaine bit her lip and shook her head "No," while two tears welled up in her eyes. She turned and started to leave the room.

"Just a moment, Charmaine," Mrs. Desmond said gently. "Would you drop in and see me after school for a little while?"

Charmaine looked apprehensive, then relieved, and said she would come. Then she turned and went back to the frogs. She was quiet during the rest of the period.

In her conversations with Charmaine during the following week, Mrs. Desmond found the cause of Charmaine's disruptive behavior. It appeared that Charmaine had been going with a small clique of girls who had suddenly decided to exclude her from their plans and activities. Charmaine wasn't sure why, unless it was because of something she had said. The girls had been talking about their ancestry and the famous families and names they counted among their forebears, when Charmaine had said, with some pride, that her great-grandmother was a Hawaiian princess. The girls had said little about this at the time, but her exclusion from the group started shortly thereafter.

The troubles faced by Billy and Charmaine appear somewhat trivial, perhaps. There is nothing particularly crucial or vital about losing an eraser or being excluded from a group of snobbish girls. Yet as far as these two individuals are concerned, the world looks black indeed, and their ability to function normally is impaired, at least temporarily. Hence we must consider problems of this type together with those that are more obvious and more dramatic. It should be noted, in passing, that children often seem to be able to stand up under difficult crises but break down in situations that seem relatively unimportant. We mention this point as a reminder that it is how the problem appears to the individual student that counts with him, not how it appears to teachers and other adults.

Emotional Disturbances. Emotional problems that disturb the functioning of individual students are not the kind of problems that can generally be treated by changes in curriculum, better methods of instruction, or special tutoring, yet they are a proper concern for the teacher because they interfere with the capacity to learn. Usually the disturbance is temporary; after a while, the difficult situation rights itself or the student learns how to adjust to the problem and accept it. Occasionally, things do not work out well; the situation does not improve or the child continues to feel defeated and upset, whereupon we have a chronically disturbed child on our hands, a child who needs more help than we can give him in our role as a teacher.

The extent to which teachers can help children with their emotional

problems will depend on the amount of time they can spend as well as on the kind of training or preparation they have for the task. There are other factors that are important, of course—the emotional climate of the school, which will govern the extent to which children will feel encouraged to talk to teachers about their problems; the conflict that sometimes arises between the role of helping students talk about their problems and that of giving the same students grades and marks; the extent to which an individual teacher enjoys counseling students; and the question of whether it is fair to the rest of the students to spend so much time with one or two.

Guidance workers can help in various ways with the problem of what to do about the student who is temporarily disturbed. The teacher can refer the student directly to a counselor or school psychologist. Sometimes, however, the teacher feels that he would like to continue the task he has already begun. Perhaps he does not want to disturb the counseling relationship that has grown up between him and the student but is not sure of how to proceed or whether the student needs more help than he can give. If so, he may be able to use the guidance worker as a consultant.

Teachers are sometimes afraid that the guidance worker may interfere in the relationship they have developed with their students. They point out that students *do* come to teachers with their problems, and should they, in effect *reject* these students by sending them on to guidance workers? No one intends, of course, that guidance workers interfere with sound teacher-student relationships. The purpose of having guidance workers in school is to get more individualized attention to more students, not to reduce any help they may now be getting from teachers. As we noted above, however, there are students who are reluctant to take their problems to teachers, and there are some students whose problems are so complex that most teachers have neither the time nor the training to do justice to them. In the final analysis, a properly functioning guidance service will help teachers do their main job of classroom instruction more effectively. Some of the ways in which such a service can help will be discussed a few pages hence.

Vocational Problems. We have so far discussed two major kinds of problems that require individualized attention and that may be overlooked in a system of mass education: learning problems and emotional problems. A third kind of problem or need is one that we have already mentioned in connection with our discussion of the duties of the school counselor: the need for vocational counseling.

The need to choose and prepare for a vocation is one of the key developmental needs of adolescence. Vocational adjustment looms large on the horizon of adult life ahead. In our culture it is perhaps the most crucial

adjustment of life, because it is so closely identified with the self-concept of the individual. When a youth talks about what he wants to be, we know that he is not so much talking about the kind of personality he expects to have as he is about the kind of work he wants to do. When we talk about "success" in life, we are usually thinking of *vocational* success. Therefore, most adolescents are aware that vocational choice and preparation cannot be undertaken casually. To be sure, many of them adopt a casual attitude as a mask for their real anxieties—just one more reason why school counselors are unable to limit themselves solely to educational and vocational problems.

There is a great deal of detailed work involved in vocational counseling that a guidance worker can handle more efficiently and effectively than a classroom teacher. The counselor who teaches part-time and who is assigned, say, two hundred advisees, will interview them once a year or oftener, if necessary; he will administer and interpret appropriate psychological tests, such as the Kuder Preference Record or the Bennett Mechanical Aptitude; he will maintain a file of occupational information; he will keep in touch with local employers and the admissions officers of nearby colleges and universities; and he will arrange for speakers representing various occupations to meet with groups of interested students. In addition, he may help students plan their programs each semester, see that they get placed in part-time jobs or summer jobs that provide valuable vocational experience, advise the school librarian on the purchase of books dealing with the major occupational fields, and maintain a file of pamphlets and other materials providing vocational information.

Some schools, being hard-pressed for funds and deciding that they cannot release teachers from classroom duties, attempt to supply some of these needs on a group basis—by setting up courses in "occupations." However, research indicates that such courses are successful only if they are supplemented by individual guidance (Stone, 1948).

The Guidance Worker and the "Dropout." Some of the inadequacies of a system of mass education are reflected in what is called the "dropout rate"—the proportion of students who leave school before graduation. At first glance, it seems a rather strange paradox that in a land where education is the key to opportunity, and where education is more or less free for the asking, only slightly more than half the individuals entering school at the first grade graduate from high school. One of the first explanations that comes to mind is that those who drop out are the ones who cannot benefit from education. Yet an uncomfortably high proportion of the students who drop out have above-average to superior aptitude. Furthermore, we really do



Sybil Shelton from Monkmeier

Many students drop out of school because they feel that further efforts to succeed are useless. Their morale is low, and they are obsessed by a sense of failure.

not know at what point or at what level young people really become uneducable. Probably few students, if any, with IQs between 80 and 90 can benefit from the college-preparatory curriculum that is standard fare at most of the high schools in this country, but it is very likely that we could provide many different kinds of educational experiences that would be of great benefit to these students, as well as to the society in which they will live.

Although it is impossible to measure the direct social cost of an incomplete high school education, statistical studies show that the "holding power" of high schools is related to a number of indices of economic, social, and political viability. Donald G. Barker and Paul R. Hensarling (1965) com-

Educational Psychology in the Classroom

puted correlations for each of the fifty states between high school retention rates and a number of variables. The high school retention rate was calculated in terms of the percentage of eighth-grade students in 1958 who graduated in 1962. As Figure 17-1 shows, states with high retention rates had low percentages of selective service registrants failing mental and illiteracy tests. They also had low rates of infant mortality and a lower number of pupils per teacher. Furthermore, citizens of states with high retention rates were more likely to vote in national elections. They tended to have higher income, paid higher teacher salaries, sold more goods, and were more likely to live in cities.

The problem of the dropout is one that seems made to order for the guidance worker. There are several ways in which he can help.

He can help, first of all, by listening sympathetically to the complaints and problems that students bring to him. Attending school, like any other kind of group activity, is an experience likely to be characterized by frustrations and injustices which, in turn, arouse hostility and/or anxiety. Many students are able to get over these feelings or at least to push them into the background, keeping in mind their main objective of finishing high school. However, some students brood about the wrongs they have suffered and permit their resentment to accumulate to the point where they can no longer

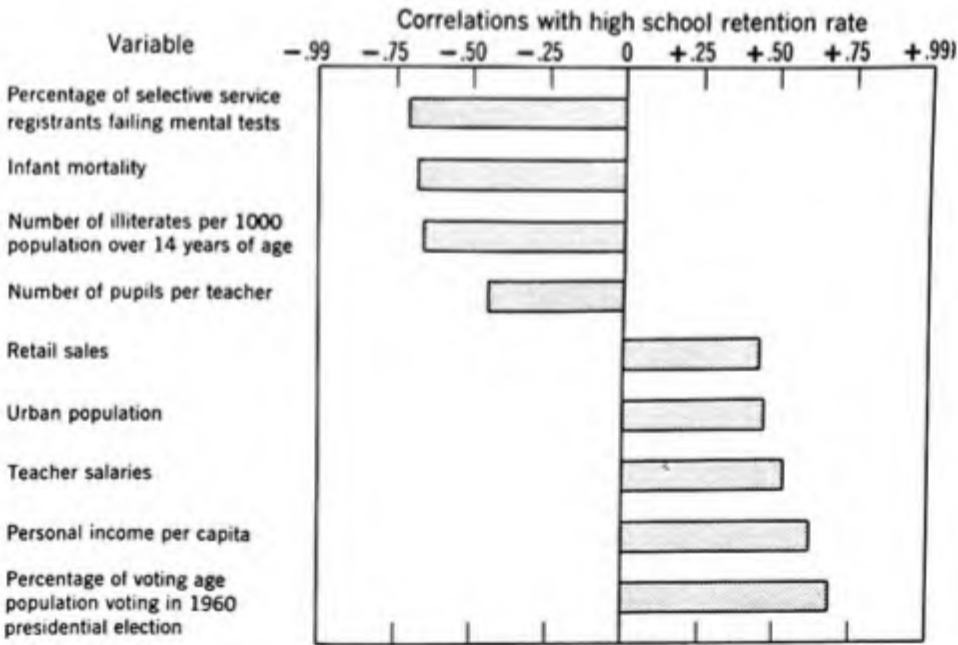


FIGURE 17-1. Relationship between the “holding power” or retention rate of high schools and various indices of mental, physical, economic, and political health in each of the 50 states. (Barker and Hensarling, 1965.)

tolerate life in school, whereupon they leave. A counselor can keep matters from going too far by providing a kind of emotional safety valve. It is difficult for anyone to maintain his resentment at a high pitch if he has a chance to talk out the problems that trouble him. Indeed, talking through personal problems with a counselor who is a "good listener" is an effective way of developing an objective point of view—a prerequisite to sensible decisions.

A large number of students drop out of school because they come to feel that further efforts to succeed are useless. Their morale is low, and they are obsessed by a sense of failure. Sometimes these students need to have someone show interest in their progress, sometimes they need an objective appraisal of their abilities, and sometimes they need to be reminded of the advantages to be gained by education.

Actually, it is impossible to outline all the ways in which counselors and other guidance workers can help students who are potential dropouts to make the adjustments that will keep them in school. Perhaps it can be summed up by saying that their chief function is to make the school more of a human institution, more interested in the welfare of each individual student. If they can make students aware that the school is interested in them as individuals, they should be able not only to lower the dropout rate but also to give all students a better feeling about the school, one that will improve their morale and general attitude, thus enabling them to gain greater benefits from their educational experiences.

The extent to which counselors can help with student problems is indicated by two studies, one by Albert S. Beckham (1953) and the other by Austin H. Turney and Charles G. Morehead (1954).

Beckham compared two groups of one hundred high-schoolers who were failing academically. One group received counseling; the other did not. He reports that nine students in the counseled group dropped out of the school during the period covered by the study, as compared to twenty-one in the uncounseled group.

Turney and Morehead compared the students of two small Arkansas high schools over the period of a year. One school had the services of a trained counselor; the other did not. Students in the school that possessed the counselor made superior vocational choices as compared to the students in the school without a counselor. Counseled students also made significant gains in personal adjustment, as measured by the SRA Youth Inventory, whereas the students in the other school did not. The authors also reported significant differences in academic achievement that favored the school with the counselor. Although the differences reported by Turney and Morehead

could have been the result of other factors than the presence and work of the counselor (differences in school morale, emotional climate, relations between students and faculty, relations between school and community, and so forth), theirs is one of a growing number of studies that demonstrate the effectiveness of good student personnel programs.

One approach that has met with some success in keeping students in school is that of the work-study program, an arrangement that enables students to work part of the day and go to school part of the day. These programs are most successful when they are supervised by counselors, who approve the kinds and places of employment, help to make adjustments between work and school schedules, and lend sympathetic ears to the problems that inevitably arise in any kind of experimental undertaking. Daniel Schreiber (1963) reported on the first year's operation of a work-study program at McKinley High School in St. Louis. The actual dropout rate of students enrolled in the program was 11.6 per cent, as contrasted with 35.2 per cent in a comparable control group. Another project in New York City that combined study, work, and guidance for fifty-three academic failures who had truancy and discipline records enjoyed similar success. Sixty-four per cent of the group graduated, as contrasted with 36 per cent of a matched control group (Slotkin, 1963).

The Able Student Who Does Not Go to College. A problem comparable in some ways to that of the dropout is that of the able student who is unable or unwilling to go to college. The counselor can sometimes aid the willing but unable student by locating information about scholarships and loan funds and helping him make application. However, the able student who says, "College is out of the question for me because my family can't afford it," may really be saying that his motivation is not strong enough. Sometimes a counselor can help persuade such a student to attend college by introducing him to such information as the differences in lifetime earnings of individuals who go to college as compared with those who do not attend. But the motivation to enter or not to enter college usually goes a great deal deeper than mere economic considerations. Some of the background factors that underlie the decision of able students not to attend college are revealed by a study made by Donald L. Thistlethwaite (1958) of a group of some 15,000 high school graduates, constituting approximately the top 9 per cent of the students taking the National Merit Scholarship tests in 1957. Although approximately 96 per cent of this top group entered college at the start of the academic year following their high school graduation, the differences between them and the 4 per cent who did not enter college (termed "dropouts" by Thistlethwaite) are quite interesting. As

TABLE 17-1. Differences between Very Able High School Graduates Who Attended College and Those Who Did Not (Thistlethwaite, 1958)

Characteristic	Percentages of Graduates Displaying Indicated Characteristic		
	Enrolled in college without scholarship	Enrolled in college with scholarship	Drop-outs
Cultural stimulation			
200 or more books in home	69	58	51
Mother had gone to college	62	52	33
Father had gone to college	71	57	38
Father in professional or managerial occupation	72	54	37
Encouragement to attend college			
Mother encouraged student	99	98	89
Father encouraged student	99	97	85
Teachers gave "quite a lot" of encouragement	76	80	88
All of student's closely associated peers going to college	48	38	21
High school preparation			
Took college preparatory curriculum	93	92	84
Took 8 or more semesters of math	61	61	46
Aspirations and plans			
Planning to enter vocation requiring bachelor's degree or more	86	90	66
Vocational plans tentative or undecided	60	56	56
Planning to do graduate study beyond bachelor's degree	61	69	36

Table 17-1 shows, the families of the graduates who entered college were able to provide an atmosphere that was more intellectually stimulating than that provided in the families of the nonentrants. The family of the college entrant was obviously much more positively oriented toward college, as is indicated by the fact that parents of college entrants were twice as likely to have attended college themselves than were the parents of nonentrants, and fathers of entrants were twice as likely to be in professional or managerial work. The parents of entrants and nonentrants alike encouraged their children to enter college, although the parents of nonentrants were somewhat less likely to give this kind of encouragement. It is interesting to note that the nonentrants had actually received *more* encouragement from their teachers than had the entrants. Of crucial significance, however, is the statistic relating to the behavior of the students' "closely associated peers." The non-

entrant was much less likely than the entrant to have friends and acquaintances who were also going to college. Thus the oft-observed effect of group norms and pressures operated here to keep significant numbers of these very able students out of college.

The Problem of Academic Pressure. An obvious solution to the problem of how to get students of all levels of ability to realize more of their potentiality for learning is that of increasing the academic pressure on them—urge them to do better, exhort them, and threaten them with academic failure if they do not do their best. This is a solution that ranks very high in the preferences of teachers and parents who are confronted with the student who “will not work up to capacity.” Sometimes such measures will work,



"Oh, you noticed! As a matter of fact, she is doing quite well in school."

Bill Knowlton, *Texas Outlook*. (Reproduced by permission.)

but more often they will not. Usually they only serve to aggravate the sense of failure that already troubles such a student. Often the guidance worker can make a positive contribution to the problem by counseling the student or by interpreting the situation to teachers and parents or both.

Herbert A. Carroll (1955) described the case of a high school sophomore girl who had refused to return to school after fainting in the classroom. During the previous year she had complained about a pain in her side, frequent headaches, and a stiff neck. Her first interview with the psychologist revealed the extent of the pressures she felt at school.

Psychologist: Would you like to tell me a little about the difficulties you have been having in school?

Client: Well, I used to work about six hours on chemistry every night. I got C's before, so I wanted to get B's now and be on the honor roll. I had handed in my notebook and I got an A on that, and the teacher told me I'd been doing well on my tests, but when I got my report card it was a D. It was supposed to be a B, I guess. My homeroom teacher had made a mistake, but I was so tired after working so long . . .

P: You worked so hard on it and you wanted so much to get a B . . .

C: I wasn't even thinking of getting a D in that. I thought I might get a D in history or something.

P: And then when you got that D you just went home and felt very badly about it.

C: Yes.

P: Did you go back to school then?

C: No, I didn't.

P: And then this fall you tried to go back again. Would you like to tell me a little about that?

C: Well, the first time I came back, I was up in the science room taking notes that the teacher was giving me when all of a sudden a faint feeling came over me. I got kind of scared. I was afraid something would happen to me and I wouldn't be able to get home.

P: Yes. You felt very faint and were concerned about your health.

C: Yes. Yes, I didn't know what was going to happen to me.

P: Would you like to tell me a little bit more about how you felt?

C: I just felt like falling down. I stayed through the day, though. I didn't eat any lunch.

P: And then when you got home, did you feel any better?

C: It took me two or three months to come out of it. After a while I recovered and felt more like myself. I felt all right except when school was mentioned. I'm just afraid of it.

P: When school is mentioned, you feel afraid. Does it bring back that same faint feeling?

C: Yes . . .

Educational Psychology in the Classroom

P: Doctor M. told me that you felt there was something wrong with you physically. Do you want to tell me anything about that?

C: Well, sometimes I think I'm going to go out of my mind. When I have that faint feeling, I'm afraid I'm going to, and if I have any crick in my neck or anything, I'm afraid I have broken my neck.

P: Sometimes, then, you feel that you do have a crick in your neck.

C: Yes.

P: And that worries you a lot.

C: Yes.

P: And sometimes you feel that you're going out of your mind.

C: Yes, when I get excited or scared or something I feel that way. My mind doesn't feel clear. I don't feel the way I should.

P: All confused.

C: Yes.

P: Have you felt that way for a long time?

C: Well, since I went to high school I have. If I had that feeling before, I can't remember it . . .

P: Pretty hard for you to sleep sometimes?

C: Well, it is if I know school is coming up again the next morning.

P: When school is coming along, you worry an awful lot about it.

C: Yes, it makes me feel kind of sick all over. Food doesn't taste good to me or anything. I don't eat very much.

P: If you were going back to school tomorrow, for instance, what would you be thinking about during the evening or the night?

C: Well, I'd be thinking how I was going to feel and how the teachers were going to be, and if the subjects were going to be hard or not. I would wonder whether or not I was going to be good in my mind; whether or not I could understand. . . .

C: Sometimes I want to get away from everything. Sometimes it is so strong that I think of killing myself.

P: Do you want to tell me when you are likely to feel that way?

C: Well, once in a while when I'm thinking about going back to school, and my mother tells me I have to go, I'd rather go down to the river and jump overboard or something, but I know that wouldn't be any help. It would just make my mother and father feel bad.

P: A pretty strong feeling, isn't it.

C: Yes. But my mother doesn't understand the reason why I can't go back. I want to go back to please her, but it's so frightening going back that almost anything would be better.

Carroll reports that after three months of counseling, the girl had regained her self-respect and the physical symptoms she had been complaining about disappeared. Although this is not an ordinary case, it does show how school

pressures can create severe and acute problems for students and how guidance workers can help students make satisfactory adjustments.

Guidance personnel can also help teachers to deal with problems of academic pressure. Clark E. Moustakas (1956) tells how a teacher, who was a member of a group devoted to the study of classroom problems and who had access to a psychologist and a visiting teacher, dealt with a child who was resisting the parental pressures for achievement.

Gerald was a ten-year-old boy in Miss Pierce's fourth-grade classroom. He spoke in a timid, babyish voice, was forgetful, engaged in extensive daydreaming, jerked his head nervously while speaking, and responded to questions with extreme difficulty. Whenever Miss Pierce looked at him, he looked away. As the semester started, he made no effort to begin an assignment or listen to one being presented.

When Miss Pierce realized that there was something wrong with Gerald, she made it a practice to go back to Gerald's seat three or four times a day and deliberately showed an interest in him. One day during reading period he seemed to be paying attention to the story being read. Miss Pierce took the risk of asking him to read and was surprised at his ease and competence. But the interest vanished as suddenly as it had appeared.

Gerald avoided other children and had no friends. He preferred to stay in during recess and lingered behind the class after dismissal every afternoon, tidying up his desk and the bookcase. He seemed to want to be near Miss Pierce, but also seemed not to care about her. After a few weeks, he began to glance at her shyly while he put the books away. He showed every evidence of wanting to say something to her, but was unable to do so. After a few more weeks of this behavior, he was able to bring himself to say good bye and ask her an occasional question about his school work.

Some of the clues to Gerald's behavior emerged from a talk Miss Pierce had with his mother, who said: "My husband, you know, is a physician and well, uh, brilliant. He gets so upset with Gerald. He won't have his son fail. We can't understand why Gerald is that way. His little sister started reading when she was only four and she helps him now. My husband gets very angry. Why, the first year he went to school and had a big scene with the teacher. He even went to the principal. I think he made it worse because the teacher got upset and failed Gerald anyhow. I don't know. I don't understand Gerald. He makes me nervous. I just had another baby girl—I was so nervous this time. I try to help him but he's so slow that I throw up my hands. Why should he be so dumb? My husband was in high school when he was eleven and was one of the youngest M.D.'s out of Ann Arbor. What do you think? What can we do?"

Miss Pierce described Gerald's behavior in the classroom to his mother and said that she felt he had considerable potentiality. She explained his slowness in terms of his frightened, anxious, and withdrawn behavior, which interfered with

his ability to achieve in the classroom. Gerald's mother agreed that he was very timid.

"He's afraid of everything—people, the dark, just everything. He won't play with children his own age. He plays only with three-year-olds. He's afraid of the dark. My husband forced him to sleep alone in a dark room, but he cried so much we had to let him sleep with his younger sister."

During the weeks that followed, Gerald felt free to discuss home problems with Miss Pierce. His comments showed increasing progress in the direction of developing positive relations with his mother. In the meantime, his academic work improved, his relations with other children became more spontaneous, and he began to participate in class discussions.¹

Helping Schools Adjust to the Psychological Needs of Students. The cases that we have described show how guidance workers and teachers, working together, can aid children in making a better adjustment to the demands of the school. This is the first major contribution that the guidance worker makes. However, he can also make a major contribution in helping schools adapt themselves to the needs of students. Some of the reasons why students fail or drop out of school are indicated by the following remarks:

"I learned how to bake a cake in home economics, but I still don't know how to shop."

"Half the kids in our algebra class got F's. I was one of them. Maybe I deserved it, but what I want to know is: Why do I have to take algebra anyhow?"

"I wanted to take auto shop or metalcraft, but the classes were full."

"When I worked up in the woods last summer, the boss and all the fellows treated me like one of the gang. Here they treat me like a little kid."

"The English teacher spends all her time on rules and parts of speech, the same stuff we had in grammar school. I guess I know the rules all right, because I got a 'B,' but I can't write good enough to get on the school paper. I wish we would learn how to write."

Perhaps we are inclined to discount such remarks as perfectly normal "griping"—something that all students do. However, if we are serious about finding out why students have difficulties or drop out of school, we must find out where *we* are failing. And the students themselves are the best source of such information.

It is difficult for teachers and administrators to evaluate an isolated complaint about the school, but a counselor who has an intimate, face-to-face

¹ Portions reprinted by permission from *The teacher and the child*, by Clark E. Moustakas. Copyright, 1956. McGraw-Hill Book Co., Inc.

relationship with a large number of students is in a good position to report what they consider to be the chief deficiencies of the school. Hence the second major contribution that guidance workers can make to reduce the dropout rate or to make instruction more effective is to help the school take stock, to help it evaluate its own program.

Perhaps the counselor will find evidence to indicate that the curriculum is too limited, that a large number of students are dropping out because their vocational needs are not being met by the standard college-preparatory courses. Or he may discover that the choice is broad enough, but that students feel that the content does not touch their everyday life; their school experiences are too remote, too bookish, too abstract. Or it may be that the social life of the school is too rigidly stratified, so that a large number of students feel on the outside of things.

Of course, the counselor cannot personally bring about the changes that seem necessary. The responsibility for such changes is shared by the administration and the faculty, as well as by the school board and the community. The counselor plays his part by keeping the school informed and by encouraging the kind of action that needs to be taken. This is not an easy task; it is often a thankless one. People seldom like to be reminded of their deficiencies, and teachers and administrators are no exception. Therefore, the counselor has to play his role of consultant and critic with much skill and sensitivity, continuing to remind his colleagues of the problem of the dropout but not carrying his campaign to the point at which he arouses hostility and resistance.

Some schools simplify this task of the guidance worker by including him on committees charged with responsibilities for curriculum revision. Sometimes he plays a major part in the in-service training of teachers. The schools where counselors have status and respect, where they are listened to and consulted by their colleagues, are the schools that are getting the greatest value from their guidance workers.

The Case Conference. One of the most effective approaches to pupil personnel problems is the case conference, in which the guidance worker who has been working closely with a certain student sits down with teachers, administrators, and other staff members to discuss the problems the student is encountering. Such conferences are valuable for a number of reasons. In the first place, they bring together several sources of information. Usually the guidance worker has the results of his interviews with the student, as well as psychological test data, interviews with parents, and cumulative records. However, he needs to have the thoughts and feelings of the other people who have worked with the child or have met with his parents. It is



Audio-Visual Services, Alameda County Schools

The case conference is one of the more effective ways for guidance workers to share and gather information and to work with teachers in developing plans to help students who are having problems.

one thing to read a few terse statements in a cumulative file and quite another to have a teacher describe what it is like to deal with the student in the classroom.

In the second place, case conferences help teachers who have a child in a classroom to gain some new insights and understandings into his behavior. These insights are valuable not only because they help teachers to understand this particular child, but also because seeing what lies behind the behavior of one child helps in understanding the behavior of other children.

In the third place, a case conference is a cooperative venture in communication. Each staff member participates on an equal basis; each is there to share information and points of view; each has something to give and something to gain. The conference provides teachers and guidance staff with an opportunity to collaborate, to tackle a problem together.

The fourth advantage to the case conference is that it gives the guidance worker a chance to share some of his findings about students in general. This not only helps teachers develop different perspectives on students, but it also stimulates thinking about changes in the school program that would be helpful in promoting the general educational plan of the school. This is

quite different from having the guidance worker get up in faculty meetings and say what is wrong with the program and what needs changing. His arguments are far more eloquent when he tells the teachers participating in a case conference about the problems faced by a child in trouble. Over a period of time, case conferences are bound to touch on a cross section of the inadequacies of the school program. The guidance worker may not even have to point them out as inadequacies, for one of the things that is likely to happen in the cooperative atmosphere of a well-managed case conference is that staff members become more objective and less defensive about the school's deficiencies. It is as a consulting participant in a case conference that the guidance worker can do some of his most effective work in helping the school adjust to the needs of the individual student.

"Life-Space" or "Crisis" Interviewing. One approach that William C. Morse (1963) has found to be useful in helping teachers gain a better understanding of the world in which children and young people live consists of a technique of interviewing which he had used to good effect in a camp for disturbed, hostile-aggressive boys. This method of interviewing is used at a time when there is a crisis or a problem. A boy has been hitting a smaller child, or a girl has failed for the third time to come through with an assignment that she had promised to turn in. The teacher or guidance worker feels that this calls for some serious talk with the student, not only because he is interested in helping the student control the behavior in question, but also because he feels the need to understand what is leading the student to behave in this negative way.

In training teachers in life-space interviewing, Morse begins by having them describe the way the world looks to the child under study and what results are likely to eventuate. This, of course, calls for a great deal of empathy on the part of the teacher, not only with the child in question, but also with children in general. The steps used in life-space interviewing are as follows:

1. The teacher begins his conversation with the student in an interested, accepting, nonjudgmental way, allowing him to describe the situation or problem in his own terms, just as he sees it, even though it may be distorted or incorrect.

2. The teacher explores the possibility that there may be other, related problems. Perhaps the problem of the moment is merely a side issue. In what way is the problem an expression of the pupil's personality? "Children frequently give deep and meaningful material at this stage, and teachers can learn to listen without probing or accepting responsibility for resolving that which is beyond their sphere of influence."

3. The teacher then raises the question: "What do you think ought to be done about it?" The pupil's system of values comes into play at this point, and he is likely to reveal any anxiety he has about committing himself to any course of behavior that might change things. Sometimes the problem "solves itself" at this stage.

4. The teacher becomes somewhat more active in the interview at the next stage, in that he indicates any features of the real world that the student may have overlooked and that might have implications for the problem at hand. This is done in a factual manner, without any change from the accepting attitudes the teacher has expressed from the beginning.

5. At this point, pupil motivation for change is explored. How does he think he might be helped? What role should the teacher play in supporting and encouraging a reasonable degree of management of the behavior in question?

6. Finally, the teacher develops a follow-through plan with the pupil. What must we do if this happens again? The plan should be realistic and relevant, must be kept within the limitations of the school resources, and must take cognizance of any possible "escape hatches." If there is any pre-tense within the school or any reluctance on the part of teachers or the administration to come to grips with issues, this must also be faced frankly. For example, the teacher cannot suggest the possibility of suspension, if it is against school policy to suspend any student, or to suggest referral to psychotherapy, if no such referral is possible.

Before using such techniques the teacher must begin with a recognized group or individual problem he is trying to work with. Morse also suggests that techniques like these should be learned under adequate supervision. During the initial stages, it may be a good idea for the teacher to interview the child in the presence of a supervisor or, at second best, tape-record the interview or take notes afterward.

It should be kept in mind that life-space interviewing has two aims: (1) to improve the understanding and empathy of the teacher, and (2) to help the student with an emotional or social problem that is causing difficulties. Morse is optimistic about the attainment of both objectives. He believes that a great many teachers have empathic and intuitive resources that will enable them to develop skill at using the method and that children generally will respond to it. He says:

Pupils do not await perfection in their teachers. They often respond well to moderation or mitigation of negative forces. This is not to say that the course is always smooth, for at times there are outcroppings of human relations that make

one wince. However, in our experience most teachers are reasonable and, when they respond in poor fashion it is usually out of frustration regarding their inability . . .

Collaboration of Teachers and Guidance Workers. Most of the day-by-day work with the emotional problems of school children is the responsibility of the classroom teacher. Linda cries because Derek keeps taking her crayons, so Mrs. Henley moves her to another table where she will be in more congenial company. Cissy copied another child's work during an arithmetic quiz. Miss Crane decides to fail her on the quiz and to have a talk with her after school. Gino counted on going to the state capital with the glee club. It was quite a disappointment to him when he didn't make it. Mr. Hines, the club's sponsor, decides that he'd better buy Gino a coke after practice to give him a chance to talk it out. Mr. Lennon notices that Mac, the new boy from out of state, had been in a fight. It occurs to him that the boy seemed to have a chip on his shoulder. He wonders what he can do to help him become better integrated with the class.

This is a rough sampling of the kinds of personal and emotional problems teachers deal with every day. Some of them turn out to be quite serious and should eventually be referred to a specialist. But even the children who are receiving treatment from specialists remain in the classroom. Hence, for better or worse, the teacher is in the position of being his own guidance worker much of the time. His effectiveness in this role will depend upon his training and experience, his flexibility, his willingness to try to understand the behavior of children, and the amount and kind of help he gets from the guidance staff. If he can develop his own skills and personal resources and coordinate them with the help the school can provide, he may have the kind of success with his "problem children" that Miss Pierce had with Gerald in the anecdotal case history we presented a few pages back. But even if he does develop his competencies in this direction, he will continue to discover new ways in which members of the guidance staff can help him. In general, the more teachers develop their ability to understand and cope with the emotional problems of the classroom, the more likely they are to make use of the special services available in the school guidance department.

SUMMARY

Although mass education is a necessary and desirable part of our civilization, it does not supply the answers to all educational problems. If the learning needs of all students are to be met, the methods of mass education must

be supplemented by arrangements for providing individualized help when needed. Much of this individualized help comes from the teacher, particularly when the problems involve classroom learning. However, teachers also help students with personal problems, and even with emotional disturbances, provided, of course, that they have the necessary background, the proper relationships with students, and the time.

Nevertheless there will always be special and individual needs that are beyond the scope of the teacher's ability to serve. These needs generally require the attention of specialists—counselors, psychologists, social workers, nurses, physicians, and administrators—persons who provide guidance or student personnel services for the school. Sometimes these specialists help by working with students who are referred to them. Sometimes their task is to see every student from time to time in the course of helping him with his educational and vocational plans. Sometimes they work with teachers on a consulting basis. And sometimes they participate with teachers and administrators in case conferences.

The guidance specialist is specifically charged with the task of helping the individual student—with individualizing education. Much of what he does is concerned with aiding the student to make an adjustment to the demands of everyday life, including those of the school. However, by working with teachers individually and collectively, he also helps the school to adjust to the needs of students. Perhaps he may present data that indicate a need for curriculum revision; perhaps he helps an individual teacher to get a better understanding of the problems of a student and thus is instrumental in bringing about a change in a classroom situation.

One of the major educational problems is that of the student who drops out of school before graduation. The problem of the bright high school graduate who does not plan to go on to college is a problem that is somewhat allied to that of the dropout. Two factors that influence the behavior of such students are family background and lack of interest in school. Increasing the academic pressure on students appears to do little good and may aggravate problems. The guidance worker may be of assistance here by working with the dissatisfied, apathetic, and overly tense student. Perhaps the student needs help in adjusting to the program of the school; perhaps there are changes that should be made in the curriculum, or perhaps the parents need to be brought into the situation.

In short, the guidance worker makes his best contribution by "humanizing" the school, by making it less impersonal, less detached and remote from the problems and needs of students.

SUGGESTED PROBLEMS

1. At the start of the chapter, the author mentioned only two of the advantages of mass education. What are some of the other advantages? What are additional disadvantages he did not mention?

2. What are some of the ways in which guidance specialists can promote better relations between schools and parents? Between schools and communities?

3. If two or three boys in your class were disruptive, at what point in your dealings with them would you use a guidance worker? How would you use him? What kind of help would you expect from him?

4. Every student has had several experiences which involve some kind of counseling relationship with a guidance specialist or a teacher. Describe an experience of your own (or that of a friend, if you prefer). How would you evaluate it? Do you think it helped you (or your friend) to make a better adjustment to the school? In what ways could the relationship have been better or more helpful?

5. Locate a college or university catalogue and make a brief list of the course titles required as preparation for counselors, psychologists, school social workers, or attendance officers. Write a sentence or two justifying each course. Are there any courses that could easily be omitted? Are there any courses not included that should be added?

6. Some school administrators insist that the school psychologists they hire have completed a year or more of classroom teaching. Psychologists often object to meeting such requirements. What do you suppose are the arguments for and against such requirements?

7. Read over the brief case description of Gerald's problem on pages 599-600. How do you think Gerald regards the significant people (parents, teacher, siblings, classmates) in his world?

SUGGESTED READINGS

Adams, J. F., ed., *Counseling and guidance*. New York: Macmillan, 1965.

Arbuckle, D. S., *Guidance and counseling in the classroom*. Boston: Allyn and Bacon, 1957.

Campbell, D. P., *The results of counseling: twenty-five years later*. Philadelphia: Saunders, 1965. A group of University of Minnesota alumni who were counseled as freshmen in the 1930s are compared with another group who were freshmen at the same time but who were not counseled.

Educational Psychology in the Classroom

- Eiserer, P. E., *The school psychologist*. New York: Center for Applied Research in Psychology, 1963. A brief, straightforward description of the roles and functions of school psychologists.
- Farwell, G. F., and Peters, H. J., eds., *Guidance readings for counselors*. Chicago: Rand McNally, 1960.
- Gottsegen, M. G., and Gottsegen, G. B., eds., *Professional school psychology*. New York: Grune and Stratton, 1960.
- Gray, S. W., *The psychologist in the schools*. New York: Holt, Rinehart, and Winston, 1963. A well-written description of the duties, training, and problems of the school psychologist.
- Henry, N. B., ed., *Personnel services in education*, 58th Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1959.
- McDaniel, H. B., *Guidance in the modern school*. New York: Dryden, 1956.
- Millard, C. V., and Rothney, J. W. M., *The elementary school child: a book of cases*. New York: Dryden, 1957. A broad sampling of cases, including anecdotal data, test scores, and a range of background material.
- Miller, C. H., *Foundations of guidance*. New York: Harper, 1961.
- Mortensen, D. G., and Schmuller, A. M., *Guidance in today's schools*. New York: Wiley, 1959.
- Sprinthall, N. A., and Tiedeman, D. V., "Guidance and the pupil." In J. I. Goodlad, ed., *The changing American school*, 65th Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1966.
- Stoops, E., and Wahlquist, G. W., *Principles and practices in guidance*. New York: McGraw-Hill, 1958.
- Strang, R., and Morris, G., *Guidance in the classroom*. New York: Macmillan, 1964. A brief paperback describing guidance services in schools, with some discussion of how teachers can participate.
- See also the following journals: *Journal of Counseling Psychology*, *Journal of the National Association of Deans of Women*, *Personnel and Guidance Journal*.

18 The Psychology of Being a Teacher



San Francisco State College—Joseph Diaz

The Importance of Self-Understanding. As we study the psychological factors that affect the learning process and the learning situation—that is, as we study the psychological aspects of being a learner—we cannot help but be impressed by their complexity. Indeed, it is easy to become so lost in wonder at the complexity of the psychology of the learner that we are likely to forget that the psychology of the teacher is equally complex. And we also tend to forget that teachers need to understand their own behavior just as much as they need to understand the behavior of the students they teach.

What goes on in the classroom may be described as a process of interaction between pupil and teacher, between classroom group and teacher, and between the individual student and the classroom group. The teacher is as much a part of this process of interaction as is the group or the individual student. Developing an understanding of children is essentially a problem of understanding human motivation. And the human being to whom the teacher is closest and with whom he is most familiar is he himself. Indeed, a fairly reasonable hypothesis would be that a teacher's insight into and understanding of his students are in approximate proportion to the insight and understanding that he possesses regarding himself.

The understanding of mental mechanisms may serve as an example. It is one thing to study a catalogue of the devious ways in which people avoid anxiety and responsibility by the little psychological tricks that they play on themselves. It is quite another to discover the same interesting quirks in our own behavior. If we advance no further than the first stage—that of cataloguing the mental mechanisms of others—we are inclined to become somewhat judgmental, moralistic, superior, or unsympathetic when we catch one of our students or a colleague using a mental mechanism. But if we have experienced the second stage—that of understanding how *we ourselves* use such mechanisms—we are in a better position to work *with* the student

or colleague, rather than against him. There is a feeling of acceptance and respect for others that comes with self-understanding.

In this book we have said much about the psychological factors and forces that affect the lives of students and, to a significant extent, make them the kinds of individuals they are and lead them to behave the way they do. Actually, the same kinds of forces affect the lives and behavior of teachers. Teachers and students alike are affected by the norms and standards of the culture and the community and experience the stresses and strains of balancing their personal needs with the demands of the group. Teachers experience a sense of freedom and heightened morale under democratic leadership or, conversely, feel rebellious or apathetic under authoritarian leadership, just as students do.

Hence we say that one of the first things a teacher must do to understand what goes on in the classroom is to understand himself and the psychological factors and forces in his environment.

INSTRUCTIONAL AND ADMINISTRATIVE ROLES

Suppose that we start our discussion of the psychology of teachers with an analysis of some of the roles they play. Roles are bits or sequences of patterned behavior that we have developed into familiar routines. Roles are based on the expectations we have of ourselves, which, in turn, stem from the expectations that others have of us. For example, we stand before the class and lead our pupils in the morning "Pledge of Allegiance to the Flag," because everyone expects us to do so and we have come to expect this of ourselves. It is part of our role of being a teacher.

Teachers play many roles. The roles interlock and overlap. Some are complementary and some are contradictory. They differ with the kind of school and the subject, and they differ, of course, with the individual teacher. What we shall try to do in this discussion is to select some of the roles that are common to most teachers and teaching situations, recognizing that our catalogue is by no means complete and that our categories are by no means mutually exclusive. Some of these categories are covered in Table 18-1, which shows the percentages of teachers who reported involvement in various kinds of noninstructional duties and activities, together with the average number of hours devoted to such duties outside the regular school hours (which average about thirty-five hours a week). It may be well to keep this list of activities in mind in reading the next few pages.

The Instructor. The first and most obvious role performed by teachers is that of the *instructor*: the person who initiates, directs, and evaluates learning.

The Psychology of Being a Teacher

TABLE 18-1. Percentages of Teachers Participating in Activities Other Than Classroom Instruction, Together with Number of Hours Per Week Devoted to School Duties Outside the Regular School Hours (NEA, 1957)

Activity	Men	Women	Elementary	Secondary	Rural	Urban
Monitorial duties (keeping order in halls and on playgrounds, etc.)	78	81	86	72	83	79
Administrative duties (library, traffic squads, etc.)	49	43	45	45	44	45
Coaching athletics	32	9	15	17	20	13
Noncoaching duties related to athletics	49	18	14	46	34	23
Directing plays, concerts, and other public performances	49	55	58	46	63	47
Sponsoring class organizations, clubs, student government, etc.	56	38	24	70	44	42
Committees and lectures related to professional improvement	50	49	47	52	38	56
Keeping records	81	88	87	85	84	87
Individual out-of-class assistance for one's own pupils	74	74	68	83	72	75
Working with parents of own pupils	64	78	79	66	69	76
No. of hours spent in school duties and activities outside of school hours	11.3	9.7	9.8	10.7	10.7	9.8

Presumably, this is the chief reason why teachers are employed—to see that learning takes place. This role serves as a kind of nucleus or “core role” for other subordinate roles—not all of them, but most of them.

In recent years there has been a shift in the focus of this role and the way in which it is played by teachers. Gordon C. Lee (1966), Dean of the College of Education, University of Washington, states that there has been a tendency for teachers to become specialists, to some degree, in a basic field of learning. This has been true of elementary, as well as of secondary, teachers. Such a trend is in contrast to earlier patterns, in which teachers were supposed to be able to teach anything and everything. Another change that he notes is the tendency for teachers to become less involved in being exclusively and predominantly sources of data and dispensers of information. There has been a growing stress on “learning how to learn” and on strategies for motivating and facilitating learning. Still another trend is for teachers to become resource people to a much greater degree. In other words, teachers today are more

likely to answer students' queries by telling them how and where to find the answers, rather than giving them information directly.

The Teacher as a Model. One of the subordinate instructional roles of the teacher is what Fritz Redl and William W. Wattenberg (1959) call the *representative of society*, the person who is charged with the task of transmitting the values and standards of the community and of the culture in general and who is perceived by students as representing or embodying these values. "By precept and example, we try to develop the moral attitudes, the thinking patterns, the life goals which we feel make for good citizens living a good life. In this role, we are more or less faithful mirrors of the society in which we live."

The teacher also serves as a model in terms of his attitudes toward the subject he teaches and toward learning in general. The teacher who has an enthusiasm for his subject and for learning in general is more likely to reinforce similar attitudes on the part of his students. The opposite is also true. It is only the rare and unusual student who can work up any enthusiasm for a subject when his teacher's approach to it is reluctant, apathetic, and lifeless.

The Classroom Manager. Another subordinate role is that of ordering or structuring the learning situation, laying down rules and procedures for learning tasks. Sometimes this role becomes that of the *disciplinarian*, the person who must see that the classroom group and its individual members stay within the limits set by society, the school, and the tasks at hand. In its best sense, the role of the manager calls for teachers to help students and classroom groups to become self-disciplining—to the end that they learn to control and limit their own behavior in the absence of adults. In its worst form, this role may lead to the nagging pettiness of the martinet and to abject apathy on the part of the class, or it may lead to a preoccupation with classroom control and a consequent reduction in learning-task involvement. Irving N. Berlin (1964) tells of an incident involving a young and inexperienced teacher who had been assigned to an unruly class of culturally disadvantaged children. When a supervisor criticized her for poor curriculum planning, she burst into tears and said: "What curriculum? Most of these fourth-graders haven't even learned to read, and I'm just a policeman."

As we have stated previously, most teachers find that their initial worries about discipline tend to diminish as they become more effective in their teaching. Teachers who have a feeling of adequacy and competence, and who are able to convey a corresponding sense of security to their classes, find that their main problems become those of how to *teach* better, not of finding better ways to handle discipline problems. If the role of the classroom man-



"When they said the hours were from 9 to 3, I didn't know they meant 3 A.M."

Mal Gordon, *NEA Journal*. (Reproduced by permission.)

ager takes precedence over that of guiding learning experiences, this is a sign that teaching is not very effective. The reasons why it is not effective may lie within the attitudes and methods of the teacher or within the attitudes of the community or the teaching staff. In either event, the problem calls for careful study and analysis.

Clerk. Another of the roles subordinate to that of instructor is that of *clerk*. Most professional jobs require a large amount of clerical work, and teaching is no exception. There are papers to be read and graded, tests to be scored, marks to be entered, reports to be made, letters and notes to be written, files to be maintained, and so on ad infinitum. Teachers tend to rate their clerical role at the lowest level of esteem, partly because it gives them less time and energy to spend on their chief role of helping children learn, and partly because they see it as incompatible with their professional role—after all, they are *teachers*, not clerks! Nevertheless workers in every profession have to devote a large portion of their time to tedious details, often of a clerical nature. Note that the category of "keeping records" accounted for the largest percentage of teachers in the group whose replies were reported in Table 18-1. Some schools in recent years have tried the experiment of providing teachers with assistants who handle such details as correcting tests and assignments, moving equipment, and putting work on the blackboard.

Youth Group Worker. Most teachers participate in one or more school activities outside of class—in what are sometimes called extracurricular or cocurricular activities. Under this heading come the directing of plays and

operettas, coaching basketball, advising clubs, sponsoring Scout troops, and the like. The survey conducted by the Research Division of the National Education Association and reported in Table 18-1 showed that more than half of the teachers included in the survey said they spent some time in such activity. This role roughly corresponds to what might be called a *youth group worker*. Writers in the field of education commonly consider this function to be part of the teacher's main role of "initiating, guiding, and evaluating learning experiences," on the grounds that much of the important learning for which the school is responsible takes place in extracurricular activities. However, many teachers see this role as something separate and distinct, perhaps because they are not physically in the classroom, because they are not "instructing" in the more formal sense, because it seems to be an added burden, or because they do not recognize it as a learning experience. Or perhaps, as with clerical duties, they see this role as somehow incompatible with that of "being a teacher"—that is, it does not fit their concept of what a teacher is or should be. However, in spite of their misgivings about the appropriateness of their functioning as youth group leaders, most teachers feel a high degree of responsibility to their students and to the school that employs them, and they know that if they did not serve as leaders and advisers to these groups, there would be no one else to take their places. Perhaps teachers would be even more effective as youth group leaders if they could see this role in perspective as an important function of their major role as guiders of learning.

In recent years there has been an increasing tendency for school districts to pay supplemental allowances for afterschool duties. A National Education Association (1963) survey reported that teachers who coached the football team were paid an additional \$845 per year, on the average. In the largest school systems, directors of marching bands made \$565 and directors of school plays, \$282. Although only two fifths of the school districts covered in the NEA's survey had included supplemental pay scales in their schedules, a great many more have informal provisions for providing extra pay for extra afterschool duties.

Interpreter to the Public. Every teacher plays this role to a greater or lesser degree and probably oftener than he realizes. In this role the teacher helps the public to arrive at a better understanding of the community's schools and what they are attempting to accomplish. The chief actor in this role is, of course, the school administrator, because he has direct access to the community through the school board and the newspapers. Furthermore, official pronouncements come from him rather than from individual teachers. What often happens, therefore, is that the responsibility for communicating with

the public is more or less abdicated by teachers in favor of the administrator or is preempted by him. Unfortunately, this policy tends to isolate teachers from the community and leads to misunderstanding of the school and its goals, loss of public support, and lower status and morale among the teaching staff.

Many teachers show reluctance when it comes to carrying out the duties of this role, because they are not clear as to what their functions as interpreters actually are. Nevertheless, the role of public interpreter is inescapable. Parents and other members of the community are continually asking teachers to comment on some aspect of the school program, and the teacher who is not familiar with the main concerns that laymen have regarding education, who is not informed about school policies, and who has not even done any thinking about the major issues in education makes a poor impression.

One opportunity to play the role of public interpreter lies in the relationship between teachers and parents. Some teachers make contact with parents during Parent-Teacher Association meetings, some make home visits, and some invite parents to meet with them at school. Almost three fourths of the teachers in the survey reported in Table 18-1 said that they spent some time working with parents. Although such contacts usually occur because of the need to discuss the progress of individual children and the problems they are encountering, a great deal of incidental learning and communication can take place. For instance, the parent can learn that the teacher is a person who is sympathetically inclined toward the problems encountered by children in the classroom, as well as toward the problems that parents face. He learns that the school is concerned about learning in the broader sense—the ability to work cooperatively with other students, as well as the ability to read, write, and cipher. Or he may learn about the kind of help the school is giving students in choosing and preparing for a vocation. The teacher helps parents to learn more about the schools by being a good listener, refraining from judgmental statements about children or parents, and avoiding the role of an advice giver. This means that the teacher will not be able to spend much time *telling* parents about the school and its goals, at least not in the initial phases of their relationship. However, as parents come to realize that teachers are interested in working cooperatively with them for the welfare of the children, they will relax some of their defenses and not only will be more receptive to what teachers have to say, but will be interested inquirers about information relating to the school.

A number of communities have developed plans which enable teachers and parents to work together closely in planning activities and policies relating to the school. Jay Davis Conner (1951) described an experiment in

which the parents of children in the fourth, fifth, and sixth grades were invited to participate in a program of two-hour meetings once a week. The first hour was spent in observation in the classroom, and the second hour was spent in discussing the observations. The experiment covered one semester, during which time the children made greater gains in academic learning than did children in grades where the experiment was not attempted. The children in the experimental group also made superior gains in their ability to apply scientific concepts to real life. Even the children in the experimental group whose parents did not participate made significant gains. One interesting result was the change in pattern of instruction: pupils talked more and teachers talked less.

John H. Niemeyer (1959), president of the Bank Street College of Education, tells of an elementary school located in an economically deprived area of New York City. Although the pupil population was predominantly Puerto Rican and Negro, the PTA consisted of a few middle-class white mothers and one Puerto Rican mother. The Board of Education, working together with a private agency, assigned a field worker to the group, a former teacher who spoke Spanish, whose assignment was to talk to the parents about their problems and interests and try to arouse their interest in the school. Within eighteen months there were forty-five Negro and Puerto Rican mothers on the eight committees that formed the leadership core of the PTA, and a number of projects were under way that demonstrated an awakened interest in and concern for the school.

Teachers also have opportunities to carry out their function as public interpreters through participation in community organizations, where they interact with members who are outside the teaching profession. The NEA survey referred to in Table 18-1 found that half the teachers belonged to three or more different kinds of community groups, and only 7 per cent belonged to no groups at all. It is within such voluntary organizations as churches, service clubs, the League of Women Voters, and "Y" groups that many of the vital decisions affecting the community and its schools are made. In a survey of school superintendents, Neal Gross (1958) found that the PTA was mentioned most frequently (by 69 per cent) as a source of public support for the school program, but local service clubs (such as Rotary, Kiwanis, and Lions) were also mentioned by a sizable number (23 per cent). There seems to be a relationship between the public spirit shown by a community and the quality of the school leadership. Gross found that the most effective superintendents tended to be appointed by school boards that were interested in and supportive of public education, and the best school boards and school superin-

tendents were in communities that strongly supported the Community Chest. It appears, therefore, that those communities that show an active concern in public welfare are the ones most likely to have the best schools.

PSYCHOLOGICALLY ORIENTED ROLES

The second group of teachers' roles might easily have been included under the first category we discussed, for many would consider them a part of being an "effective guider of learning experiences." Although there is much to be said for including them under the first category, we are treating them separately, because they are roles in which the teacher becomes the *educational psychologist*—the psychological worker in an educational setting. These roles are relatively new ones for teachers to play. The teacher of today is taking on these roles because he realizes that the more traditional roles of subject-matter expert and disciplinarian are too limiting and do not provide an adequate base for the effective promotion of learning.

The Artist in Human Relations. One of the chief roles teachers play as educational psychologists is that of the *artist in human relations*—the person who works with a variety of techniques and forces to produce situations that will stimulate learning. We use the term "artist" because the work of an effective teacher is much more than using the "right techniques." It involves sensitivity for the needs and feelings of the group, as well as for knowing how to introduce a new topic into the discussion, when to end the discussion of a given subject, how to change pace and emphasis, and the like. We also use the term "artist" as a way of indicating that no two teachers will teach the same subject or the same class in the same way. They may be equally successful, but their approaches will vary with the differences in their personalities, with their background, and with the conditions under which they teach. Professional workers in all fields are to some degree artists, at least to the extent that they blend both scientific lore and personal experience in carrying out the functions of their profession.

On another occasion, the present writer expressed himself as follows:

Essentially, any person who works with dynamic, changeable, and complex media as human relationships is, or ought to be, an artist. An artist may use formulas and techniques to help him with his work, but he uses them in a highly individualized manner. A technician decides what to do about a problem because of what his rule book or his manual tells him. An artist makes *his* decisions on the basis of what *feels* like the right thing to do. He may be aided by scientific knowledge, but he knows better than to operate through the rigid application of formulas (Lindgren, 1954).

The Group Builder. The artist in human relations who works in an educational setting must be a *group builder*. The traditional teacher gives no great thought to the classroom group as such, except perhaps to regard it as a menace. As we indicated in Chapter 12, he thinks of teaching in terms of a relationship between himself and individual pupils. The teacher who is a serious student of the psychology of the classroom, however, knows that the *group* can knowingly or unknowingly block the progress of learning and that there are factors or forces *within the group* that can be used to stimulate learning. And he knows, furthermore, that groups that have high morale and are cohesive are more receptive to learning than groups that are poorly integrated. Therefore, he sees his job as a teacher, at least to some extent, as one of building the classroom group by helping students understand and accept one another, work together cooperatively, share experiences and materials, and communicate more effectively both with one another as well as with the teacher. Indeed, promoting effective communication will be one of the chief tasks of the teacher who attempts to function as a group builder.

The Catalyst. Another way to look at the many-layered role of a teacher as educational psychologist, artist in human relations, or group builder is to think of him as a *catalytic agent*. In the physical sciences, a catalyst is an element or substance that helps to bring about a change. Water is commonly used as a catalytic agent, inasmuch as many compounds will not react unless they are in solution. A teacher may be thought of as a psychological catalyst, because many changes occur merely because he is there. He may not be actively or personally involved in the changes, but they would not occur if he were absent. All teachers have a catalytic effect of some kind on their classes; the problem is to produce changes that are integrative and group-building, rather than disintegrative.

Mental Hygiene Worker. This role includes all the functions a teacher performs in helping students learn more effective patterns of living, in reducing neurotic anxiety or in arousing normal anxiety, in helping them meet their psychological needs, in guiding them through the developmental tasks that lead to greater maturity, and the like. In this role he may function as a referral agent to a counselor or some other guidance worker, he may give reassurance or emotional support, he may restrain or limit—there is an endless list of things he can do or may do to improve the mental health of the classroom group or of the individual student.

Like other roles we have described, that of the mental hygienist may be played incidentally and simultaneously with other roles. Irving N. Berlin (1964), speaking from his experience as a psychiatrist consultant to a number of school systems, gives one example of how a teacher played this kind of

a role in the course of instruction in arithmetic. We cite this incident not only because it is a good example of a teacher playing a mental hygienist role, but also because it shows how success in this role depends on being natural, "real," and, most of all, persistent:

I observed a teacher of delinquent adolescents return day after day to helping a hulking, sullen, hostile, loud-mouthed delinquent boy learn the fundamentals of addition and subtraction. Despite threat of physical violence, sullen negativism, feigned illness, and emergency trips to the toilet by the youth, the teacher spent a designated twenty minutes [a day] with him. Thus, he slowly convinced the youngster that he felt the boy could learn, that he could teach him, and that this kid was important to him. I can recall now with the same spine-tingling excitement, the day when this boy got the first real glimmering of understanding of arithmetic, as his veiled eyes began to glow with pleasure. This occurred after weeks of persistent effort. Toughness, not sweet offers of love from the teacher, seemed to do the trick. This teacher, in discussions about this boy and his stubborn refusal to learn, many times expressed feelings of anger and hatred because the youngster was frustrating his best efforts. As you read of these events, I am sure you recognize the kind of love that was there—love which has as its focus the well-being of someone else, such as the parent whose love is revealed by the time he is willing to spend with his children to help them acquire the fun of learning and subsequently the pleasure of effective living as a useful citizen.

Being a mental hygiene worker is perhaps not the chief role of a teacher, unless we consider the education of children essentially a process of improving their mental health. At any rate, most teachers do not see this as their chief role. Yet if a teacher ignores the mental-health aspects of his work, he will be much less effective than he should be. He will fail to help his students at crucial times and with crucial problems, and he will ignore some of the more basic goals and objectives of education. If education is to do its part in developing healthy citizens for a healthy society, teachers must become aware of the responsibilities of their roles as mental hygiene workers.

SELF-ORIENTED ROLES

So far, we have been discussing the roles that teachers play in their attempts to serve the needs of the community in general and the child in particular. However, much of what we do as teachers is an attempt to meet our *own* needs—our personal needs, as contrasted with the needs of those we serve. Teachers are sometimes unwilling to admit that there is any motive but concern for others in their work. Yet all behavior occurs at least partly in response to our own psychological needs; even when we are ministering to

the needs of other people, we are simultaneously meeting our own needs to help others. The needs related to "self-oriented roles" are the needs that teachers have because they are the kind of people they are, the needs that make them different from people who perform other professional roles.

Social Service Worker. Most teachers chose their profession at least partly because it offered an opportunity to help others, to build a better world, or to give something of themselves to further the common good. On the Strong Vocational Interest Blank for Men, for example, social science high school teachers and school administrators reveal themselves to have interests that are similar to those of YMCA secretaries and physical directors, ministers, personnel directors, and public administrators—people who spend their professional lives in helping others (Strong, 1943). Teachers score higher than most people on the social service scale of the Kuder Preference Record (Kuder, 1951). In carrying out the role of the social service worker, the teacher often makes adjustments in his personal life, and even sacrifices, in response to the ideal of "the greatest good for the greatest number." It is this dedication to helping others, even at some personal cost, that has led many teachers to spend months and years abroad under difficult and primitive conditions as



Roy Witlin from Black Star

The need of teachers to help others have led many of them into the Peace Corps. This Peace Corpsman has interrupted a reading lesson to interpret a first-aid booklet to the Colombian children he is teaching.

members of the Peace Corps and other groups extending aid to developing countries.

The Learner and Scholar. Although these two roles are different in some respects, they overlap and merge into each other; hence we link them together in this discussion. Scholars are people who are interested in learning; they have an interest in and respect for ideas. Many a person has been drawn into teaching through his enjoyment of reading and his interest in some field of subject matter. Some of the really outstanding teachers in our schools are people who have an enthusiasm for their subject and are able to communicate in such a way that students are somehow infected with their enthusiasm and are stimulated into learning for themselves. Other teachers, unfortunately, contain their enthusiasm within themselves and stimulate nothing in their students but boredom and apathy.

Irving N. Berlin (1960) notes that the teachers who have the most difficulty in learning are the ones also who seem to have the most difficulty in coping with problems of all kinds. He says:

I have been most interested in . . . teachers who appear to derive little satisfaction from learning. Since they themselves have not acquired the capacity to obtain pleasure and satisfaction from learning, from working effectively and mastering their job, they seem to be especially vulnerable to situations where their students manifest similar problems. . . . Thus they are caught in the dilemma of trying to help others do what they themselves cannot do. Many of them turned to education in the hope that they could get by with little effort or knowledge, only to find themselves increasingly disorganized, harried, frantic, and unable to control their classes. If the administrator tries to help by making the job easier, by expecting less of the teacher or doing some of it for the teacher, the problems usually are compounded. These teachers tend to regress the more their work is done for them. They are most difficult for administrators, and I feel they are their most troublesome problems.

For such teachers classroom control is extremely difficult. They often lose their tempers and resort to corporal punishment in a desperate effort to maintain some control of their pupils. The substitute of force for teaching skills and knowledge occurs frequently with these teachers and presents recurrent problems to the administrator.

The most effective teachers are those who are able to grow not only in the knowledge of their subject but in their understanding of life both in and out of the classroom. For some teachers, the classroom is a rut that they erode deeper as the years go by, but for others it is a fascinating laboratory of life, in which they grow in their ability to understand more about their subject, more about children and how they learn, and more about themselves as teachers and as individuals.

The Parent-Figure. Still another role that distinguishes teachers from persons in other occupations is that of the *parent-figure*. Children tend to look upon teachers somewhat as they would upon a substitute parent.¹ Their attitudes toward teachers tend to be somewhat similar to the attitudes they have toward their own parents, and they expect teachers to react and behave more or less as their parents do. For their part, teachers tend to reciprocate because they, too, see themselves in a parental relationship to their students. Perhaps teachers are more conscious of their roles as social service workers and scholar-learners than they are of their roles as parent-figures. Yet there is a fairly steady undercurrent of parentlike behavior in many of the relationships between teacher and child. The importance of the parental role in teaching is highlighted when we compare teaching with other professions—accountant, engineer, chemist, journalist—occupations from which the parental element is largely absent. Observations of teachers in classroom situations lead us to believe that most, if not all, effective teachers are people who can accept their role as part-time parents and play it with ease and grace, without overstressing it or understressing it. And we are led to the further belief that many people who enter teaching and find it a satisfying profession are people who need to express themselves through parental roles, people who rather enjoy being parent-figures.

This is probably as good a place as any to comment on a very interesting difference between parents and teachers. Although a teacher may play a parental role for a child, his psychological effect on the child is quite different from that obtained by his real parent. As a matter of fact, the teacher may have an advantage in the fact that he is not the parent. Parents often fail at the task of trying to teach their children even simple skills, perhaps because the parent-child relationship makes it difficult to institute an effective teacher-pupil relationship. The two relationships may not be very compatible. Indeed, the question can be raised as to whether parents are really the best teachers of academic skills for their children. One experiment suggests that children actually perform more poorly for their parents than for strangers. Nursery school children were asked to play a very simple game in the presence of a stranger or one of their parents. As Figure 18-1 shows, their performance was higher when the adult was a stranger rather than a parent (Stevenson, Keen, and Knights, 1963). Somehow, being watched by an adult who was not a parent gave the task a degree of importance or excitement that led the child to put out more effort. The significant point here is that teachers may be able to make unique contributions to the lives of children simply *because they are not their parents*.

¹ This attitude is reflected in the laws relating to schools that designate them *in loco parentis*—as parent-substitutes—during the portion of the day that children are in school.

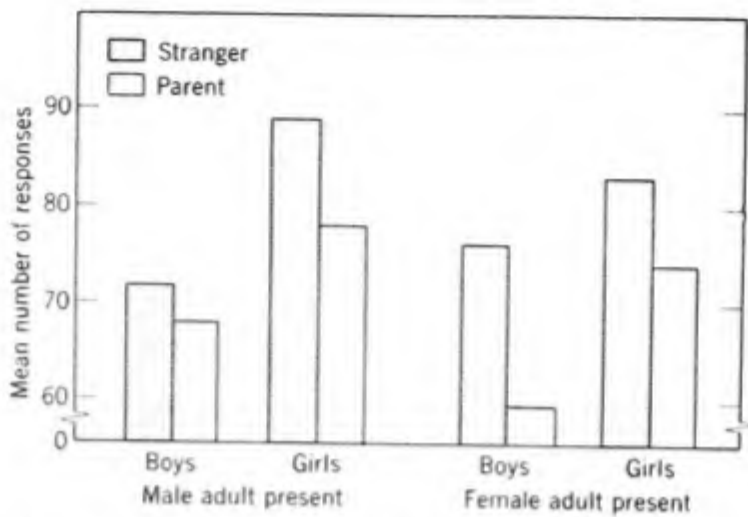


FIGURE 18-1. Differences in the performance of nursery school children obtained when a strange adult was present, as contrasted with that obtained when a parent was present. (Stevenson, Keen, and Knights, 1963.)

The Power Seeker. There is another role related to that of the parent-figure, one that may be more sinister—at least it is more provocative or controversial in its implications. It is the role that the teacher plays as a *power seeker*. This is the role of the person who enjoys controlling and directing other people, the role of the person who “knows best” and wants to impose that best on the lives of others. Undoubtedly, most teachers do not think of themselves as power seekers, yet there is no doubt that teaching is a job that is concerned with power wielding—that is, with directing, controlling, judging, rewarding, punishing, and limiting. Teachers are, of course, not alone in their search for power, since workers in all professional fields are to some extent seeking power over people, forces, or things. And teachers certainly need some power in order to cope with the problems of the classroom.

However, there are at least two problems that arise from the search for power. One is that power seeking complicates and may even negate our attempts to improve human relations in the classroom. The goals of power seeking and of creating democratic classrooms are basically and mutually incompatible. Indeed, the conflict between the search for power and the desire to develop a democratic atmosphere in the classroom is a common source of guilt feelings, dilemmas, and anxieties. The relationship between democratic attitudes and effectiveness in teaching is shown by an analysis of the letters of 14,000 students from the first through the twelfth grade who wrote on the topic, “The teacher who helped me most.” When Paul A. Witty (1951) of Northwestern University analyzed these letters, he found that the personality trait that was most characteristic of the helpful teacher

was "cooperative, democratic attitude," with "kindliness and consideration for the individual" coming second. These two traits ranked higher than traits that are more commonly identified with the instructional aspect of teaching behavior, such as "use of recognition and praise" and "unusual proficiency in teaching." The latter two traits ranked eleventh and twelfth in the list. It appears, therefore, that the traits which students recognize as most characteristic of an effective teacher are those which are associated with democratic behavior and concern for the individual student.

One of the characteristics of people who are power-oriented is that they usually score high on tests measuring tendencies to prefer authoritarian rather than democratic solutions in problems involving human relations. One study found that student teachers with authoritarian leanings had "very few warm accepting attitudes toward children" (Ofchus and Gnagey, 1963). Another set of studies showed that teachers with strong authoritarian attitudes tended to be less willing to endorse educational practices that were based on students' psychological needs and that embodied democratic principles. The research also showed that such teachers scored low on tests measuring attitudes associated with independence in thought and behavior. Although most people tend to think of authoritarian individuals as being free and independent because of their willingness to use power in arbitrary, decisive, and often punitive ways, this research makes the point that authoritarian individuals are likely to be more conforming, less independent, and more afraid of being different than are individuals who subscribe to democratic ideals and who favor child-centered programs. One interpretation of such findings is that it takes a great deal of independence to maintain one's faith in democratic classroom procedures in the face of unfavorable public opinion. (Lindgren, 1961, 1962; Lindgren and Singer, 1963; Al Omar, Eid, Majdalani, and Lindgren, 1965.)

A second problem that teachers encounter in their search for power is that of determining how much power they really need. There is a rather common tendency to feel that we do not have the power to do the things we need to do, and this feeling persists no matter how much power we may have. And it is commonly observed that those persons who are most concerned about power are the ones least capable of using it.

The Security Seeker. Related to the search for power is the search for security. Many teachers have become attracted to the profession because it promises a high degree of financial and psychological security. In general, teachers are people who like life to be stable and predictable; hence they avoid taking chances and making changes that would disrupt the *status quo*, even when they feel there are some chances that should be taken and some things

that need changing. This does not mean that teachers are against progress, but rather that they feel that the changes progress brings should come slowly. The role of the *security seeker* is not without its problems. Just as it is difficult to decide how much power is enough, so it is equally difficult to decide how much security is enough, because there is always the chance that the unexpected may happen. And one of the chief difficulties in pursuing power and security is that we can become so absorbed in our pursuit that we easily lose sight of our main job of teaching. In that connection, it is worthwhile noting that persons who are psychologically secure seem to be able to achieve this goal at least in part by their ability to give security to others. The very act of reassuring others can itself be a source of personal security.

The list of roles we have described does not, as we said, constitute a complete catalogue, but it does reveal some of the ways in which teachers behave differently from other professional workers and it does provide some clues to the kinds of satisfactions and frustrations that teachers find in their work.

Perhaps this discussion of some of the negative motives that lead persons into teaching may raise doubts as to whether individuals who have emotional problems of the type we have mentioned should actually go into teaching. However, few people, if any, are free from emotional problems and conflicts of some sort or other. In noting some of the differences between successful and unsuccessful teachers, Percival M. Symonds (1950) made the following observations:

It is a common belief that only normal, well-adjusted persons should be teachers. But some of the successful teachers observed were definitely neurotic, and their neuroticism contributed to their success as teachers. Here is a teacher who is obviously compulsive-obsessional. She puts great emphasis on order, accuracy, precision, and she is teaching children to order their lives. Here is another teacher with an overdeveloped conscience who teaches her pupils to distinguish right from wrong. Here is another teacher with a need to dominate who vigorously carries children along with her own high standards of achievement. Here is a teacher with masochistic tendencies who whips herself by the long hours and hard work she puts into the job. These neurotic teachers may not fit every type of situation but if they can find the right place they can be high constructive influences.

DISINTEGRATIVE AND INTEGRATIVE FORCES IN TEACHING

Conflicts in Roles. Teaching is strenuous work. Some of the strain comes from the need to play many different roles, particularly roles that are in

conflict with one another. One of the key problems that faces the teacher, therefore, is that of integrating his roles, organizing them around the values in life that are most important to him, and playing them in ways that are not in basic conflict with his self-concept or his self-ideal. The need for developing an integrated and reasonably consistent approach to life, on the job and off, is one that every adult faces. When we are continually forced to behave in ways that are mutually inconsistent and that open up gaps, so to speak, between our self-ideals and our self-concepts (between what we think we should be and what we think we are), we are likely to be dissatisfied, unhappy, and ineffective in our work. Feelings of optimism, satisfaction, and happiness are not only pleasurable in and of themselves, but they are also indicative of and basic to good mental health. Therefore, we need to be aware of the factors and forces in our professional lives that help us to develop integrity and strength of personality, as well as those factors that impede integration or are disintegrative and dangerous to our morale and sense of well-being.

Even as there are many roles performed by teachers, so is there also a wide range of factors that impede or aid integration. These factors differ, of course, with each teacher's personality and situation. Furthermore, factors that disturb one teacher may not affect another in the slightest. However, there are some factors and forces that tend to be present in every teaching situation and that are consistently integrative or disintegrative. Let us first consider the ones that are disintegrative.

One has only to follow a teacher through a typical working day to realize how many tensions, pressures, and frustrations he must cope with. Let us examine a small sample of the kind of problems teachers must face by following one teacher through the first few hours of her day.

When Miss Frank faced her sixth-grade class that Monday morning, she had a neatly typed schedule before her of the things she expected to do that day and when she expected to do them. It really wasn't necessary to type the daily schedule, but Miss Frank liked things neat and efficient.

Everything ran according to plan at first. As the 8:50 bell finished ringing, the class stood at attention and recited the "Pledge of Allegiance." While Jane Kitagawa, the news-committee chairman for the day, hurriedly collected items from her committee members, Miss Frank entered the names of two absentees on the daily report and placed the form in the clip near the door. By the time she had finished, Jane was standing before the class, ready to give her report. The time was 8:55.

This morning's news was especially interesting, if somewhat grim. An American plane had been shot down while flying near the boundaries of an unfriendly

nation. Even one or two of the more retiring students wanted to have their say on this subject, and Miss Frank let the discussion run on, because she felt that it was a good thing for students to get involved in thinking about problems that had an international scope. After the discussion had gone on for twelve minutes beyond the time she had scheduled for it, she reluctantly brought it to a halt and began to summarize the important points students had made, intending also to bring out some issues they had overlooked. She had hardly finished the first sentence when a monitor from the office opened the door, collected the attendance report, and brought a mimeographed notice to her desk for her to read.

Miss Frank sighed; it seemed as though she was always being interrupted at crucial points.

She read the announcement to the class. It told of the exhibit of student art work in the cafeteria during the noon period and gave directions on how students could vote for paintings to be entered in the city-wide art contest. The directions were a little complex and there were a few questions to be clarified.

As the monitor left, Miss Frank glanced at the clock. It was 9:30, and she was twenty minutes behind schedule. She had wanted to have a short spelling lesson, based on the news presentation, but that would put her even farther behind schedule unless she took the time out of the free-reading period. It always seemed that the free-reading period was the victim when something happened to the schedule. This was too bad, because the children enjoyed the reading period and seemed to get a lot out of it. Besides, the reading period was her chance to work with Gene and Clarence, her two retarded readers. She hadn't been able to give them any help for more than a week.

She decided to let the spelling go for the day and to go on to the history lesson, which was supposed to cover the Monroe Doctrine. The interest of the class had been reasonably high when they studied the War of 1812, during the preceding weeks, but these sixth-graders seemed to be able to focus more easily on wars than on other historical events that Miss Frank felt were just as important. To be sure, wars had drama and excitement, something that was lacking from political pronouncements like the Monroe Doctrine. In order to bring the subject to life, Miss Frank had secured a short historical film. The projector was being used by another teacher during the first hour of school, and she was to get it at 9:45.

She began to talk to the class about the international situation that led to President Monroe's pronouncement, trying to give them some background for the film. She would have preferred an approach that would have involved the participation of the class, but it seemed important for them to get a brief synopsis of events, and she felt that she could do this herself more quickly and efficiently.

She had barely warmed up to her subject when Mr. Whitehead, the principal, appeared at the back door with Mrs. Eliason, the assistant superintendent for elementary education. They both smiled at her, asked her to go on, and took seats at the back of the room. Miss Frank knew that she had nothing to worry about; she had always got along well with the administration. Besides she had tenure.

Educational Psychology in the Classroom

But she never felt at ease when people watched her at work in front of a class. She had a sinking feeling in the pit of her stomach and she always expected that she would commit some horrible error. She never had, really, and the principal had always complimented her on her work, but she wondered whether he wasn't just being nice.

She continued her discussion of the Monroe Doctrine, leading up to the things the children were to watch for in the film. She was aware that the class was less attentive than it had been before the two adults had entered the room. Several children were giving them sidewise glances, and there was an air of restlessness and uneasiness. Hence she was relieved when she finished her short presentation and was able to send two of the bigger boys down to the office to get the film and projector. As she started to pull down the shades to darken the room, both Mr. Whitehead and Mrs. Eliason came up to her, thanked her for letting them sit in her class, said that she certainly knew her subject and her class, and left.

Nine forty-five came and went, but there was no sign of the boys with the audio-visual equipment. Miss Frank told the class they could talk quietly till the film was ready to begin. When 9:50 came, she decided to investigate. She left the class and hurried down to the office, arriving just as the teacher who had had it during the first hour was turning it in. The other teacher was apologetic, saying that it had taken her longer to thread the machine than she had expected. Miss Frank said that she sometimes had that trouble, too.

It was almost 10:00 by the time she got back to the room with the two boys and the equipment. By 10:05 she had the film threaded through the machine. The boys had set up the screen and plugged in the speaker. The class settled down to watch the picture. Two words appeared on the screen, upside down: "The End." Miss Frank set her teeth, to keep from saying what she felt like saying, and stopped the machine. Someone had forgotten to rewind the film. The class laughed and then started to talk, everybody all at once. Miss Frank had to speak to them sharply to remind them to keep their voices down.

By the time she had the film rewound and rethreaded, it was 10:15. She was in a quandary. The film would take twenty minutes to run and would not be over till 10:35. But at 10:30 the bell would ring for a ten-minute recess, and recess was followed by a twenty-minute period of directed play. She wished that she had not got involved with a film that morning and she began to regret that she had ever heard of audio-visual aids. Sometimes they were more trouble than they were worth. But the children were expecting a film, and it was probably best to go through with it. She decided to show fifteen minutes of the film, stop it when the bell rang for recess, and finish it when they came back from their physical education class. Then they would have their discussion. Miss Frank felt strongly about having discussions after films: there was really no point in using them unless you had some kind of discussion to tie the loose ends together. Goodness knows, stopping a film in the middle and picking up again after a half-hour

lapse wasn't the best way to do things, but once you are committed to a film, it's better to go through with it. She hoped that no other teacher wanted the projector during the next hour, but that was a chance she would have to take. She would have to dash down to the office to check on this between doing hall duty at the beginning and end of recess. She'd just have to keep her fingers crossed till then. Teaching was wonderful when things were going right, but it was nerve-racking when things went wrong. Trouble was, there were too many days like today.

These thoughts flashed through her mind in rapid sequence as she flipped the projector switch on and watched the film title and credits appear on the screen. She would have to make some more adjustments in her schedule. It looked as though the free-reading period would be a casualty again today. . . .

Of course, matters do not always go as badly for Miss Frank as they have during the first two hours of the day we have described, but such days are not unusual. There is hardly a day without its interruptions, frustrations, and emergencies. There are announcements, assemblies, hall duty, yard duty, cafeteria duty, faculty meetings, conferences with parents, talks with individual children, last-minute preparations—all to be fitted into an overcrowded schedule. This is what makes teaching a demanding, tiring job. When teachers find themselves shifting from one role to another with barely a moment's notice, it is not surprising that some of the roles become incompatible and contradictory.

Conflicts in Expectations. During the last few decades, the teacher has become the focal point for an ever-broadening range of expectations. Inasmuch as roles and expectations bear a close relationship to each other, the greater the variety of expectations focused on the teacher, the greater the variety of roles he must play. It is inevitable, under such circumstances, that conflicts should develop among these roles and expectations. For example, there is often a discrepancy between what people expect of teachers and what teachers expect of themselves. The administration may expect the teacher to follow the prescribed curriculum to the letter, without deviations, but at the same time to make adjustments for certain students who have difficulties. Or the teacher may be expected to maintain high academic standards in his classes, but to promote all students automatically. Parents may expect the teacher to be a strict disciplinarian, but also to be a person who loves children and is loved by them in return. The teacher is expected by some to be a paragon of all virtues, even to the point of never losing his temper or raising his voice, but still to be a very human kind of person.

Unfortunately, the teacher cannot succeed in all of these roles. He cannot be both a stern dispenser of justice and also someone who is liked by children as a friend. Perhaps one of the reasons he is inclined to play roles



Zora Castagnoli

Most professional jobs involve a lot of paper work, and teaching is no exception. Not only are there assignments to correct and grade, but a great many different kinds of records must be kept.

that are contradictory is that he tries to live up to too many expectations. He does not want to disappoint anyone; he would like to satisfy everybody. What he really wants to do is to avoid trouble and go about his business of helping children learn.

Yet because the schools belong to the community, and because the community is composed of so many different people and groups with varied interests, teachers are almost certain to disappoint someone. Very often the lay public is disappointed because the expectations it has for the school are neither realistic nor appropriate to its function. This means, in the final

analysis, that some people are going to feel that the school and its teachers have let them down and have failed. As a basis for their belief that teachers have failed, they are going to say that high school graduates cannot spell, children are unmannerly, students are too much concerned with what goes on in other countries, the students are not concerned enough with what goes on in other countries, the rate of juvenile delinquency is rising, or whatever seems to them to be a matter for concern.

Teachers would be peculiar indeed if they did not react negatively to being the focal point for disappointment and disapproval. To be accused of having failed arouses anxieties. Even though a teacher may be deriving deep satisfactions from the kind of work he is doing, he cannot help but wonder whether his critics are right. Some teachers, especially those whose faith in themselves is not very strong, are made very anxious by accusations of this sort. It is therefore not surprising that teachers and teachers' organizations become oversensitive and defensive about criticism, even constructive, reasonable criticism.

Teachers are inclined to set high standards for themselves. They are likely to be people who never quite achieve what they expect of themselves—that is, there tends to be a gap between their self-ideal and their self-concept. Therefore, when they find themselves the focal point for criticism, their sense of failure and guilt is heightened. A probable result of these pressures is the relatively high proportion of neurotic symptoms to be found in the teaching population. For instance, one study by Harry L. Smith and Nicholas C. Hightower (1948) at the Mayo Clinic showed that teachers are more likely to suffer from symptoms involving some neurotic disturbance than are people in other occupations (see Figure 18-2).

Conflicts in Loyalties. A problem related to the differing expectations teachers feel they must satisfy is that of split or divided loyalties. A teacher's first and primary loyalty is said to be to the children for whose learning he is responsible. We use the phrase "is said," because teachers are so often put in the position of having to subordinate this loyalty to other loyalties.

Mr. Dexter was supposed to send Rodney to the principal because he found him smoking in the boys' lavatory. That was the school rule and there was no other course he could take. Mr. Dexter somehow wished that he could talk to Rodney alone, because he felt that his smoking was related to the fact that his parents were in the throes of divorce. Rodney had always been a well-behaved boy, but during the last two weeks, while the divorce proceedings were being reported in lurid detail on the front page of the paper, Rodney had been sullen and rebellious. Mrs. Henderson, the principal, handled all smoking violations the same way—they got the strap. Mr. Dexter decided he would have to talk to her

Educational Psychology in the Classroom

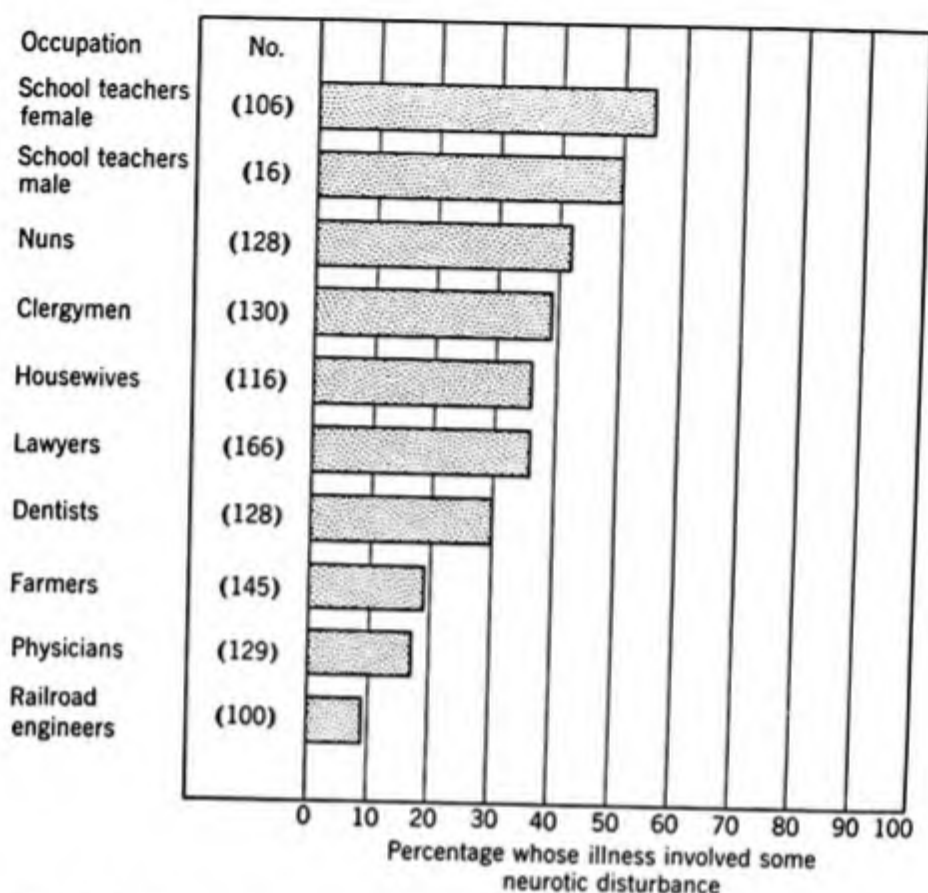


FIGURE 18-2. Incidence of neurotic disturbance or involvement among 1164 patients from various occupations receiving treatment at the Mayo Clinic. (Smith and Hightower, 1948.)

about Rodney, but he felt that it wouldn't do much good. Who knows, perhaps a strapping *would* help the boy. It seemed to straighten out some kids. . . .

Mr. Dexter has a conflict in loyalties, a conflict he will probably resolve in favor of the administration. Psychologically, it will cost him something to make the decision, for no matter whether he reports Rodney or not, he will experience some feelings of guilt.

Teachers also have loyalties to themselves as professional workers and as individuals. Part of Mr. Dexter's conflict stems from the fact that he feels, as a professional worker, that there are better ways of dealing with Rodney's problems than strapping him; it also goes against the grain for him to "tell" on Rodney. He feels that Rodney's problem is one that he could handle himself and he rather resents the regulations that take it out of his hands.

Conflicts involving divided loyalties are sometimes aggravated by an administration that is unfriendly or unsympathetic to the mental health of the school. The crucial role played by administrative personnel in determining

the emotional climate of the school is indicated in a study by Reuben J. Margolin (1953), who reviewed the content of discussions carried on as part of a mental-health institute for teachers held at Brookline, Massachusetts. Here is his interpretation of what teachers had to say about administrators:

Authoritarian administration adversely affects interpersonal relations among colleagues. Often there is a resentment against authority for unfair distribution of teaching load. Professional jealousy becomes a festering sore, insidiously operating to the detriment of the school program. In this hostile atmosphere, no teacher can work closely with the administrator for fear of being thought by his colleagues as an "apple-polisher."

One factor clearly emerged. . . . The pattern or tone for the human relationships in the school is distinctly set up by the administrator, and this pattern frequently extends to the community. This is especially evident when frustrated teachers express their aggression against parents, making fruitful parent-teacher relations very difficult or well-nigh impossible. . . . Authority relationships constitute the fulcrum upon which levers can be applied for transmitting forces that lead to good or bad mental-hygiene practice in the school.

On the positive side, teachers felt that the kind of interpersonal relations fostered by democratic relationships with administrators made teaching an enriching experience. Administrators, they said, should permit teachers to plan with them: "Sharing in decisions encourages closer working relationships essential to effective administration. Teachers . . . feel the need to be regarded and respected as individuals in their own right. Creativity in teaching depends greatly upon the administrator's respect for individual differences."

The problem of getting administrators to behave in ways that are more democratic is not an easy one, however. For one thing, many of them do not seem to have any awareness of how democratic or undemocratic their behavior is. Robert E. Cummins (1957) found, in a study of teacher and administrator attitudes, that three out of four school principals gave themselves higher ratings in democratic behavior than their staffs did. The principal whose behavior was rated as least democratic of all the principals, gave himself the highest self-rating.

Teachers also owe a certain loyalty to the community that employs them. Because of this, they sometimes feel uneasy when they teach or discuss certain topics that some people in the community want excluded from the curriculum, or, even more likely, when they omit certain topics because of community pressures. What is involved here is a conflict between what teachers think children should learn and what some groups in the community think they should learn (or not learn). Teachers are highly sensitive and vulner-

able to these pressures, not only because they are employees of the community, but because they are a part of the community itself. It is difficult for them to run counter even to a minority opinion when they are continually hearing their fellow citizens say: "I think that something ought to be done about the things that go on in schools these days!" And so teachers stop and ask themselves whether anyone will be upset if they follow their own judgment in deciding what topics should be taught or discussed. In many communities, teachers have learned to avoid discussing the facts of human reproduction, the role of this country in international affairs, the history and function of labor unions, racial segregation, or any other area of human experience that happens to be touched by controversy.

Evidence as to the extent to which conflicting and opposing pressures are brought to bear on schools is provided by a survey conducted by Neal Gross (1958), whose staff interviewed 105 school superintendents and more than 500 school board members. Here are some of the findings:

59 per cent reported receiving protests about views expressed by teachers; 13 per cent received demands that teachers express certain views.

59 per cent were under pressure to emphasize the "3 R's" more, whereas 64 per cent reported demands that more courses and subjects be taught.

19 per cent received protests about textbooks in current use, while 7 per cent faced demands that certain textbooks be used.

39 per cent reported protests against the introduction of new school services, such as guidance and health programs, but 63 per cent had demands that the school introduce such services.

29 per cent received demands that new teaching methods be introduced, while 43 per cent reported protests against the introduction of new teaching methods.

In this connection, there is some indication that teachers are inclined to be overly sensitive when it comes to public opinion. In Chapter 1 we noted some research suggesting that teachers tend to be more concerned about the opinions of persons outside their profession than about those of their peers and colleagues (Rettig and Pasamanick, 1959; Jacobson, Rettig, and Pasamanick, 1959). This preoccupation and concern with public opinion readily leads to exaggerated ideas about its threat potential. John V. Chilcott (1959) interviewed teachers and laymen in a community and found that both groups tended to have the same expectations for the kind of behavior that they expected of teachers. However, Chilcott found that teachers tended to reinforce the expectations of the community and to make these expectations more rigid.

Teachers as Targets for Hostility. Another disintegrative force in the lives of teachers is what might be called "unearned hostility." Sometimes teachers

become the targets for hostility because their education and professional position give them a higher status than that enjoyed by most people. People who are sensitive about such differences sometimes make the teacher the target for malicious gossip; at other times, this feeling is expressed through an undercurrent of resentment. For example, a school board composed largely of people who have high school education or less might be unduly critical and uncooperative because of feeling unduly defensive or inferior about the differences in educational level. Some insecure parents become jealous when their children express a fondness for their teachers; others are upset when their children contradict them, quoting the teacher as an authority. Other parents become angry when a teacher wishes to discuss their child's difficulties with them, because they have taken the attitude that the entire problem of the child, his discipline and his behavior, is the responsibility of the school, not theirs. Often such parents had problems in school when they were youngsters and now have consistently negative attitudes toward the school and toward teachers. And then there is the resistance and resentment that teachers all too frequently find in their own classrooms. By the very nature of their jobs, teachers often have to stop children from doing things they enjoy and start them doing things they dislike. No one likes to be frustrated, least of all children, and it is to be expected that they may develop some hostile feelings as a result. Even teachers who are able to operate democratic classrooms find that their relations with students are not free from hostility; hostility is something that almost every person encounters who performs a leadership role.

Many of the criticisms that have been leveled at the schools in recent years have been of a definitely hostile character. W. James Popham and Suzanne W. Greenburg (1958) surveyed articles appearing in national periodicals between 1948 and 1958 and found that the number of articles criticizing the field of professional education in the second half of the decade was double what it was during the first half. Their predictions that it would increase even more sharply have been fulfilled. The largest proportion of the critics were college and university personnel outside the field of education, and most of the criticism appeared to be based on the personal experiences of the writers, rather than on any real research evidence. The significance of this criticism lies in the tendency of writers who attack professional education to attack public school programs as well. Furthermore, the very hostility and fervor of the assault has made it fashionable to set up public education as a kind of target that anyone can attack with impunity. The result is that teachers have been placed even more on the defensive and their anxieties have been raised even higher.

Effects of Disintegrative Factors. It is difficult to say, with any degree of exactness, what the net effect of the disintegrative factors has been on the teaching profession. It may show up in the studies that report that older teachers are less effective than younger ones. It may be that over the years the need to cope with disintegrative factors tends to reduce the enthusiasm and drive that are essential in good teaching. Disintegrative factors undoubtedly show up in the form of neuroses, as the study by Smith and Hightower (1948) indicates. Still another effect is the loss of able teachers who decide, after a few years of teaching, that they will go into other fields of work, where the opportunities for self-expression and advancement are better, and the disintegrative factors fewer.

This loss of talent is no mere supposition. A U.S. Office of Education study by Robert L. Thorndike and Elizabeth Hagen (1959), of the careers of 658 men who had been engaged in teaching and educational administration for some period of time, showed that those who left teaching were intellectually superior to those who remained. Harry Levin, Thomas L. Hilton, and Gloria F. Leiderman (1957) found that men who left teaching tended to have made higher grades in college than men who stayed, although the opposite was true for women. A survey of the Class of 1955 of the University of California, conducted in 1960, showed that only a few alumni were dissatisfied with their jobs and wanted to change, but those who were teachers showed the most interest in changing their jobs (Stroup and Pierovich, 1960).

The disintegrative forces and factors in teaching make heavy demands on teachers. There is no question but that they constitute a serious threat to the mental health of both teachers and the children who are placed in their charge. Indeed, if it were not for counterbalancing factors and forces that are of even greater importance, the education profession would not be able to attract and hold the million and a half individuals who serve as teachers in this country and Canada.

Integrative Factors in Teaching. In spite of the annoyances, tensions, and anxieties that constitute the disintegrative forces in teaching, most teachers like their jobs and would not change. Only a minority of the teachers in the University of California study were considering a job change. In the NEA survey that we referred to at the beginning of this chapter, 54 per cent of the men and 81 per cent of the women said that if they had the chance to start over again, they would still go into teaching.

There are many studies that indicate the kinds of satisfactions teachers find in their profession. J. C. Gowan (1957) approached twenty teachers rated as best out of 3000 women elementary teachers and asked them what they thought were the main satisfactions and appeals in teaching. Eleven said that

being with children was the most important reward; eight mentioned watching change and growth; and three mentioned changing the attitudes of children. J. Marc Jantzen (1959) conducted three surveys of student teachers between 1946 and 1956. His results not only show a very consistent pattern, but also confirm earlier studies of teachers' attitudes. When he asked the students why they had selected teaching, both men and women ranked the following factors in the same order: interest in children and young people; reasonable assurance of adequate income; lifelong opportunity to learn; summer vacations for study, travel, and relaxation; and enthusiasm of a former teacher. A study by George G. Stern and Joseph M. Masling (1958) of the unconscious factors in the motivation of teachers produced an interesting list of attitudes and gratifications, which is presented in a somewhat modified form in Table 18-2.

An examination of the items in Table 18-2 shows that there is a wide variety of satisfactions that are to be found in teaching. Probably few other occupations can satisfy such a variety of motives. Even on the score of economic returns, teachers are better off than most employed persons. Although the pay in teaching is not high, in most communities it is at least up to the average income received by all employed persons. Because their work is steadier and is less responsive to seasonal fluctuations and business cycles, teachers are generally able to maintain a consistently higher standard of living than most employed persons over a lifetime period.

The significant rewards in teaching are, however, more psychological than economic. It is difficult to say which of the several satisfactions that we have

TABLE 18-2. Motivational Patterns in Teaching, Based on an Analysis of Teacher Statements Regarding Sources of Gratification in Teaching (Stern and Masling, 1958)

Gratifications	Mode of Expression
1. Instrumental rewards	1. Detachment; a "practical approach" to life
2. Prestige	2. Maintenance of professional dignity
3. Children's affection	3. Providing love
4. Children's autonomy	4. Encouraging self-actualization, self-direction, and independence in children
5. Promoting teachers' rights	5. Organizational activity; reforming the schools
6. Vicarious participation	6. Identification with children; enjoying children's experiences
7. Neatness and orderliness	7. Developing good pupil habits
8. Support from superiors	8. Cooperating with persons in authority
9. Children's admiration	9. Showmanship in teaching
10. Children's obedience	10. Maintaining discipline and order

Educational Psychology in the Classroom

mentioned are of greatest importance as an integrative factor, because motives are highly personalized and vary with each individual. It is very likely that the opportunity to serve humanity is an important one for most teachers. The idea that one is making a contribution to the lives of young people, helping them even a little in their task of growing up to achieve the best that is in them, has great potential as an integrative force. Teachers can accept a high degree of frustration and disappointment if they feel that they are making some positive contribution to the citizens and the community of tomorrow.

Teaching also offers opportunities for personal growth. Relatively few teachers really feel that they have reached the limits of their professional skill. The opportunity to experiment and to learn better ways of teaching is an attraction that keeps many teachers in the profession in spite of the disintegrating and frustrating experiences they encounter in their daily work. This area of opportunity is, however, one that could be expanded far beyond its present limits. It may well be that the tendency for more able men to leave the profession is a result of their inability to find sufficient opportunity for personal and professional growth. It may be, furthermore, that the inability of administrators to provide a favorable climate for creativity and growth is a factor here. Levin, Hilton, and Leiderman (1957), in the study mentioned above, found that administrators were cited as a major source



Audio-Visual Services, Alameda County Schools

The more teachers work together for common goals, the more they strengthen feelings of identity with the educational profession.

of dissatisfaction by persons who had left the teaching profession. In any event, there must in the future be much more encouragement for creative teachers than there is today, if the profession is not to lose its more able people.

An interesting sidelight to this dissatisfaction with administrators is provided by a study of teacher behavior as reported by students. Students in junior and senior high schools in Texas were asked to rate 554 student teachers on a number of characteristics. When supervisors were asked to rate the same teachers on their effectiveness, they tended to favor the ones that students had also rated high on three factors: (1) being friendly and cheerful, (2) being knowledgeable and poised, and (3) exercising strict control over their classes. However, teachers whom students *preferred*, who were more interesting, and who used democratic procedure tended to be ignored by supervisors (Veldman and Peck, 1963). Such findings help explain why it is that the profession continues to lose its more creative teachers. Apparently, this will continue until supervisors, and other persons who make judgments of teachers, become more encouraging of creative and experimental approaches to teaching.

Although the status of teachers is often thought by teachers themselves to be quite low, a survey conducted by the National Opinion Research Center of the University of Denver shows teachers as rating well above average for a broad sampling of occupations (see Table 18-3). The impression is, furthermore, that the trend is in the direction of still higher status. Evidence of this improvement is provided by the fact that teachers today are given greater personal freedom and are paid more adequately than previously. There is a greater tendency today for teachers to stand up for their rights. In California, for example, the state teachers association has not only undertaken legal action for teachers whose professional and personal rights are jeopardized, but has taken some positive steps to uphold educational standards in communities where they have been threatened. The willingness of teachers both in the United States and in Canada to support higher credential standards in terms of general education and professional training is also winning them respect. Even the negative attention directed toward teachers today is evidence of the importance placed on the value of education and the role and function of the teacher. As teachers contribute to and become aware of the increasing status and importance of their profession, they will be helped to outgrow the all-too-common feeling of being on the fringes of life.

Still another integrative factor lies in the opportunities teachers have to work together with other like-minded persons for a common cause. As the teacher realizes that he is part of a large movement—of something that is

Educational Psychology in the Classroom

TABLE 18-3. Status Rankings of Various Occupations (Including Teachers) Selected from a Total List of 90, Which Were Ranked by a Representative Cross-Country Sample of Americans (National Opinion Research Center, 1947)

Occupation	Rank (in Total List of 90 Occupations)
U.S. Supreme Court Justice	1
State governor	2
Physician	2
Cabinet member in federal government	4
Diplomat in U.S. foreign service	4
U.S. Representative in Congress	7
College professor	7
Scientist	7
Architect	15
Lawyer	15
Psychologist	22
Author of novels	31
Economist	33
INSTRUCTOR IN PUBLIC SCHOOLS	33
Building contractor	33
PUBLIC SCHOOL TEACHER	36
County agricultural agent	37
Radio announcer	40
Printshop owner and operator	42
Newspaper columnist	42
Electrician	44
Reporter on daily newspaper	48
Travelling salesman for wholesale concern	50
Policeman	54
Carpenter	58
Plumber	59
Barber	66
Restaurant cook	70
Taxi driver	77
Street sweeper	89
Shoeshiner	90

bigger than he is, that is bigger than his classroom or the school system in which he works—he gets the sense of participating in a grand enterprise. As he works with other educators in pursuit of their common goals, he is able to share his ideas and skills, to help others and be helped by them, to accept and be accepted as a member of a large professional fraternity. Such experiences are integrative, strengthening, and reassuring. To be sure, collaborating with others also brings frustrations and disappointments, but as teachers con-

tinue to work together and have successes in overcoming obstacles and solving the problems that are bound to occur, the forces that unite them will grow stronger.

SUMMARY

The effectiveness of a teacher depends as much on his understanding of himself as it does on his understanding of his students. Hence it is essential that teachers study and try to understand the psychological factors in their own lives.

The varied duties, functions, and problems for which the teacher is responsible require him to enact a number of psychological roles, which in this book are grouped under the heading of instructional and administrative roles, psychologically oriented roles, and self-oriented roles.

Instructional and administrative roles include the subordinate roles of instructor, model, representative of society, classroom manager, clerk, youth group worker, and interpreter to the public. Teachers take most of these roles for granted, for they are obviously and traditionally an inherent part of being a teacher. Some of the roles, such as those of youth group worker and interpreter to the public, are less obvious and more likely to be slighted.

The psychologically oriented roles of the teacher include those of the educational psychologist, artist in human relations, group builder, catalytic agent, and mental hygiene worker. Teachers carry out these roles whenever they make use of the techniques and theories developed by psychologists, particularly those techniques and theories that are related to mental hygiene and the dynamics of group processes. These roles also serve to broaden the function of teaching beyond the relatively narrow limits of traditional concepts of education.

There is a third category of roles that are largely "self-oriented"—roles that are functions of the self-concepts of teachers. Among these roles are those of the social service worker, learner and scholar, parent-figure, power seeker, and security seeker. Some of these roles are positive forces; others are negative. However, they have much to do with the kinds of individuals who are attracted to teaching and who find satisfactions therein.

Conflicts in roles and expectations make teaching strenuous and difficult work at times. The public served by the teacher may expect things of him that are mutually inconsistent; the teacher, too, may have expectations of himself that are mutually inconsistent. Because of these inconsistencies, the teacher is bound to disappoint someone. When he is aware that he is not living up to expectations, he is likely to develop anxieties.

Educational Psychology in the Classroom

Teachers are also troubled by conflicts in loyalties—loyalties to students, to administrators, to the community, and to themselves. Sometimes they are forced to behave in ways that compromise some of their loyalties, thus adding to their burden of anxiety and guilt. At other times, they become targets for unearned hostility because of their superior education, the jealousy of insecure parents, and the popular tendency to criticize the schools. Such pressures and frustrations have led to the loss of some of the more able people in the profession.

The disintegrative factors in teaching are fortunately outweighed, as far as most teachers are concerned, by the integrative factors. Teaching provides a broad range of satisfactions, ranging from those that are personal and practical to those that are idealistic and humanitarian. It provides opportunities to do work that is creative and important, to achieve status and prestige, to give something of oneself, to attain financial security, to contribute something of value to the lives of children and youth, and to attain greater personal growth. Teaching provides opportunities, too, for individuals to work together in common cause with like-minded people.

SUGGESTED PROBLEMS

1. Why should our understanding of students depend on our understanding of ourselves?
2. In what way would the mental mechanisms of teachers interfere with their understanding of children or of themselves?
3. What are some of the psychological reasons why teachers usually dislike clerical work more than most other phases of their duties?
4. Why might teachers object to carrying out the role of interpreting the school to the public?
5. Judging from your own school experiences, to what extent do teachers today play psychologically oriented roles?
6. Are there any self-oriented roles, other than those listed in the text, that figure importantly in teaching?
7. Some writers hold that many people find teaching a way of rising from lower-middle-class status to upper-middle-class status. If this is so, which of the several roles discussed in this book would play an important part in this process? Which of them might be particularly attractive to persons interested in improving their social status?
8. In what ways might the interests and satisfactions of teachers *differ* from those that are characteristic of people in medicine, law, social work, and

engineering? How might they *resemble* the interests and satisfactions of people in each of these professions?

9. What can teachers do to increase the area of freedom that is available to them to experiment with finding new and better ways of teaching?

SUGGESTED READINGS

- Barr, J. A., *The elementary teacher and guidance*. New York: Holt, Rinehart, and Winston, 1958. See Part III, "Home-school relations."
- Biddle, B. J., and Ellena, W. J., eds., *Contemporary research on teaching effectiveness*. New York: Holt, Rinehart, and Winston, 1964. Contributions made to a conference devoted to finding ways of making teachers more effective.
- Bruce, W. F., and Holden, A. J., Jr., *The teacher's personal development*. New York: Holt, 1957. A discussion of some of the psychological problems involved in being a teacher. Treats many of the issues raised by the present chapter.
- Combs, A. W., *The professional education of teachers: a perceptual view of teacher preparation*. Boston: Allyn and Bacon, 1965. Some of the more intriguing chapters are, "What is a good teacher?", "The teacher's self," and "The personal discovery of ways to teach."
- Hunter, E., and Amidon, E. J., *Student teaching: cases and comments*. New York: Holt, Rinehart, and Winston, 1964. Presents thirty-six cases, each illustrating a problem or a dilemma encountered by student teachers and new teachers, together with discussions of alternative solutions.
- Kaplan, L., *Mental health and human relations in education*. New York: Harper, 1959. See particularly the last chapter, "Human relations in school administration."
- Lee, G. C., "The changing role of the teacher." In J. I. Goodlad, ed., *The changing American school*. 65th Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1966, pp. 9-31.
- Lieberman, M., "The influence of teachers' organizations upon American education." In N. B. Henry, ed., *Social forces influencing American education*. 60th Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1961.
- Lindgren, H. C., *Mental health in education*. New York: Holt, 1954. See chapters dealing with teachers and parents.
- Mitchell, L. S., *Two lives: the story of Wesley Clair Mitchell and myself*. New York: Simon and Schuster, 1953. The story of two effective, creative individuals and their happy and successful marriage. The careers described are those of a leader in the development of education for young children and an original thinker in the field of economics.
- Redl, F., and Wattenberg, W. W., *Mental hygiene in teaching*, 2nd ed. New York: Harcourt Brace, 1959. See chapters on teachers' roles, teachers' dilemmas, working with parents, and teachers' problems.

Educational Psychology in the Classroom

Ryans, D. G., *Characteristics of teachers: their description, comparison, and appraisal*. Washington: American Council on Education, 1960.

Sarason, S. B., Davidson, K., and Blatt, B., *The preparation of teachers: an unstudied problem in education*. New York: Wiley, 1962. A paperback that raises questions about the kind of preparation teachers should have in the use of psychological principles in order to encourage children to be intellectually curious, develop and utilize their own resources, and engage in productive learning.

Person to person. Washington: National Education Association, no date. A pamphlet issued by the National School Public Relations Association, in cooperation with the Department of Classroom Teachers, for the purpose of providing teachers with some suggestions on how they can best represent their school and their profession to the public.

The following journals often contain material relevant to the subject of this chapter: *Education*, *Educational Administration and Supervision*, *Educational Leadership*, *Educational Theory*, *Journal of the National Education Association*, *Peabody Journal of Education*, *Phi Delta Kappan*.

References and Author Index

Works cited in this book are listed alphabetically by author and year of publication. Numbers in boldface type following each citation refer to the text pages on which the works are cited. Page numbers in parentheses refer to suggested readings listed at the ends of chapters.

- Abbott, L., *see* Wilson et al.
- Adams, J. F., ed. (1965). *Counseling and guidance*. New York: Macmillan. (607)
- Adelson, J., *see* Douvan and Adelson.
- Ahmann, J. S., and Glock, M. D. (1963). *Evaluating pupil growth*. Boston: Allyn and Bacon. (463)
- Aiken, W. M. (1942). *The story of the Eight-Year Study*. New York: Harper, **414**, (420)
- Al Omar, N., Eid, S. K., Majdalani, M., and Lindgren, H. C. (1965). Tendermindedness in education, independence, and authoritarianism: a cross-cultural study. *Psychol. Rep.*, 17:238. **626**
- Albrecht, G. (1960). A Survey of teacher opinion in California. *Phi Delta Kappan*, 42:103-108. **523**
- Allebrand, G. N., *see* Zimmerman and Allebrand.
- Allison, S. G., and Ash, P. (1951). *Relationship of anxiety to learning from films*. Pennsylvania State College, Human Engineering Report (SDC 269-7-24). **307**
- Allport, G. W. (1952). *The resolution of intergroup tensions*. New York: National Conference of Christians and Jews. (166)
- Altus, W. D. (1965). Birth order and academic primogeniture. *J. pers. soc. Psychol.*, 2:872-76. **41**
- Alway, H. G. (1947). The law, the prophets, and geometry. *Calif. J. sec. Educ.*, 22:458-60. **303**
- Amen, E. W., and Renison, N. (1954). A study of the relationships between play patterns and anxiety in young children. *Genet. Psychol. Monogr.*, 50:3-41. **307**
- Ames, L. B., and Walker, R. N. (1964). Prediction of later reading ability from kindergarten Rorschach and IQ scores. *J. educ. Psychol.*, 55:309-13. **302**
- Amidon, E. J., *see* Hunter and Amidon.
- Anderson, C. C. (1962). A developmental study of dogmatism during adolescence with reference to sex differences. *J. abnorm. soc. Psychol.*, 65:132-35. **77**
- Anderson, C. M. (1950). The anatomy, physiology, and pathology of the psyche: a new concept of the dynamics of behavior. *Amer. Practit. Dig. Treatment*, 1:400-405. **38**
- Anderson, D., *see* Patterson and Anderson.
- Anderson, H., and Anderson, G. (1956). Cultural reactions to conflict: A study of adolescent children in seven countries. In G. M. Gilbert, ed., *Psychological approaches to intergroup and international understanding, a symposium of the Third Interamerican Congress of Psychology*. Austin, Texas: Hogg Foundation for Mental Hygiene. **109**
- Anderson, H. H., and Brewer, H. M. (1945). Studies of teachers' classroom personalities. I. Dominative and socially integrative behavior of kindergarten teachers. *Appl. Psychol. Monogr.*, No. 6. **333**

References and Author Index

- Anderson, H. H., and Brewer, J. E. (1946). Studies of teachers' classroom personalities. II. Effects of teachers' dominative and integrative contacts on children's classroom behavior. *Appl. Psychol. Monogr.*, No. 8. 333
- Anderson, H. H., and Brewer, J. E. (1946). Studies of teachers' classroom personalities. III. Follow-up studies of the effects of dominative and integrative contacts on children's behavior. *Appl. Psychol. Monogr.*, No. 11. 333
- Anderson, J. E. (1942). The relation of emotional behavior to learning. In N. B. Henry, ed., *The psychology of learning*, 41st Yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. 293
- Anderson, J. P. (1940). A study of the relationships between certain aspects of parental behavior and attitudes and the behavior of junior high school pupils. New York: Bureau of Publications, Teachers College, Columbia Univ. 193
- Anderson, K. E., et al. (1956). Toward a more effective use of sound motion pictures in high school biology. *Sci. Educ.*, 40:43-54. 384
- Anderson, R. C. (1965). Can first-graders learn an advanced problem-solving skill? *J. educ. Psychol.*, 56:283-94. 68
- Anderson, R. H., see Goodlad and Anderson.
- Anderson, W. E. (1946). An attempt through the use of experimental techniques to determine the effect of home assignments upon scholastic success. *J. educ. Res.*, 40:141-43. 328
- Anderson, W. F. (1954). Attitudes of parents of different socio-economic status toward the teaching profession. *J. educ. Psychol.*, 45:345-52. 122
- Angell, M. A. (1953). High school English—can we justify it as a college admission requirement? *School Rev.*, 61:351-56. 295
- Antoinetti, J. A., see Welsh and Antoinetti.
- Arbuckle, D. S. (1957). *Guidance and counseling in the classroom*. Boston: Allyn and Bacon. (607)
- Asch, S. E. (1958). Effects of group pressure upon the modification and distortion of judgments. In E. E. Maccoby et al., eds., *Readings in social psychology*, 3rd ed. New York: Holt. 296
- Aschner, M. J. M., see Gallagher and Aschner.
- Ash, P., see Allison and Ash.
- Asker, W. (1923). Does knowledge of formal grammar function? *School and Society*, 17:109-11. 225
- Ausubel, D. P. (1961). A new look at classroom discipline. *Phi Delta Kappan*, 43:25-30. 357-358
- Ausubel, D. P. (1962). Can children learn anything that adults can—and more efficiently? *El. School J.*, 62:270-72. 299-300
- Ausubel, D. P., Schiff, H. M., and Goldman, M. (1953). Qualitative characteristics in the learning process associated with anxiety. *J. abnorm. soc. Psychol.*, 48:537-47. 309-310
- Axline, V. (1947). Nondirective therapy for poor readers. *J. consult. Psychol.*, 11:61-69. 528
- Baker, C. T., see Sontag et al.
- Baller, W. R., and Charles, D. C. (1961). *The psychology of human growth and development*. New York: Holt, Rinehart, and Winston. (54), (90)
- Bandura, A., and Huston, A. C. (1961). Identification as a process of incidental learning. *J. abnorm. soc. Psychol.*, 63:311-18. 95
- Bandura, A., and Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinehart, and Winston. 39, 115
- Bankston, H. S. (1953). Human relations in a Louisiana elementary school. *Understanding the Child*, 22:55-56. 407
- Bany, M. A., and Johnson, L. V. (1964). *Classroom group behavior: group dynamics in action*. New York: Macmillan. (420)

References and Author Index

- Barker, D. G., and Hensarling, P. R. (1965). Correlates of high school retention rates by states. *J. exper. Educ.*, 58:298-99. 592
- Barker, R. G., Dembo, T., and Lewin, K. (1943). Frustration and regression. In R. G. Barker et al., eds., *Child behavior and development*. New York: McGraw-Hill. 188
- Barr, J. A. (1958). *The elementary teacher and guidance*. New York: Holt, Rinehart, and Winston. (166), (645)
- Bass, B. M. (1960). *Leadership, psychology, and organizational behavior*. New York: Harper. (345)
- Bassett, S. J., see Brooks and Bassett.
- Battle, H. J. (1957). Relation between personal value and scholastic achievement. *J. exper. Educ.*, 26:27-41. 319
- Bauernfeind, R. H. (1951). Guidance at the elementary school level. *Studies in higher education: Proceedings of the 15th Annual Guidance Conference*. Div. of Educational Reference, Purdue Univ., No. 76. 400-401
- Bayles, E. E. (1960). *Democratic educational theory*. New York: Harper. (242)
- Bayley, N. (1964). Consistency of maternal and child behaviors in the Berkeley Growth Study. *Vita Humana*, 7:73-95. 103-104
- Bayley, N. (1965). Comparisons of mental motor test scores for ages 1-15 by sex, birth order, race, geographical location, and education of parents. *Child Developmt.*, 36:379-411. 41, 475
- Bayley, N., see also Jones and Bayley.
- Bealer, R. C., Willits, F. K., and Maida, P. R. (1964). The rebellious youth subculture—a myth. *Children*, 11:43-48. 194
- Beatty, W., and Clark, R. A. (1960). *A learning theory for teachers*. Unpublished paper, San Francisco State College. 253, 293
- Beck, J. M., and Saxe, R. W., eds. (1965). *Teaching the culturally disadvantaged pupil*. Springfield, Ill.: Thomas. (574)
- Becker, S. W., Lerner, M. J., and Carroll, J. (1964). Conformity as a function of birth order, payoff, and type of group pressure. *J. abnorm. soc. Psychol.*, 69:318-23. 41
- Beckham, A. S. (1953). Incidence of frustration in a counseled as compared with an uncounseled high school group. *Ment. Hyg.*, 37:445-49. 593
- Bedoian, V. H. (1953). Mental health analysis of socially overaccepted, socially underaccepted, overage and underage pupils in the sixth grade. *J. educ. Psychol.*, 44:366-71. 519
- Bedoian, V. H. (1954). Social acceptability and social rejection of the underage, at-age, and overage pupils in the sixth grade. *J. educ. Res.*, 47:513-20. 519
- Beilin, H. (1959). Teachers' and clinicians' attitudes toward the behavior problems of children: a reappraisal. *Child Developmt.*, 30:9-25. 16
- Bell, R. Q., see Waldrop and Bell.
- Benjamin, H. (1939). *The sabre-tooth curriculum*. New York: McGraw-Hill. (242)
- Bennett, E. L., Diamond, M. C., Krech, D., and Rosenzweig, M. R. (1964). Chemical and anatomical plasticity of brain. *Science*, 146:610-19. 40
- Berenda, R. W. (1950). *The influence of the group on the judgments of children*. New York: Bureau of Publications, Teachers College, Columbia Univ. 152
- Berlin, I. N. (1956). Some learning experiences as psychiatric consultant in the schools. *Ment. Hyg.*, 40:215-36. 583-584
- Berlin, I. N. (1960). From teachers' problems to problem teachers, *Ment. Hyg.*, 44:80-83. 623
- Berlin, I. N. (1965). Mental health consultation in the schools: who can do it, and why. *Community Health J.*, 1:19-22. 535
- Biddle, B. J., and Ellena, W. J., eds. (1964). *Contemporary research on teaching effectiveness*. New York: Holt, Rinehart, and Winston. (645)
- Bigge, M. L. (1964). *Learning theories for teachers*. New York: Harper and Row. (277)

References and Author Index

- Biggs, J. B., *see* Miller and Biggs.
- Bingham, A. (1958). *Improving children's facility in problem solving*. New York: Bureau of Publications, Teachers College, Columbia Univ. 237, 391, 395, (421)
- Birns, B. (1965). Individual differences in human neonates' responses to stimuli. *Child Developmt.*, 36:249-59. 81
- Blakely, W. P. (1958). A study of seventh grade children's reading of comic books as related to other variables. *J. genet. Psychol.*, 93:291-301. 248
- Blatt, B., *see* Sarason et al.
- Blommers, P., *see* Coffield and Blommers.
- Bloom, B. S. (1964). *Stability and change in human characteristics*. New York: Wiley. 555
- Bloom, B. S., Davis, A., and Hess, R. (1965). *Compensatory education for cultural deprivation*. New York: Holt, Rinehart, and Winston. (575)
- Bloom, R. D., *see* Dunn et al.
- Blue, J. T., Jr. (1958). The effect of group study on grade achievement. *J. educ. Psychol.*, 49:118-23. 337
- Bollenbacher, J. K., *see* Jacobs and Bollenbacher.
- Bommarito, B., *see* Kerber and Bommarito.
- Bond, B. W. (1956). *Group discussion-decision: An appraisal of its use in health education*. Minneapolis: Minnesota Dept. of Health. 331
- Bonney, M. E. (1944). Sex differences in social success and personality traits. *Child Developmt.*, 15:63-79. 199
- Bonney, M. E. (1947a) Sociometric study of agreement between teacher judgments and student choices. *Sociometry*, 10(2):133-136. 144-146
- Bonney, M. E. (1947b). *Popular and unpopular children, a sociometric study*. Beacon, N.Y.: Beacon House. 147
- Borg, W. R. (1964). *An evaluation of ability grouping*. Cooperative Research Project, No. 577. Logan: Utah State Univ. 522, (539)
- Borum, E. A., and Livson, N. (1965). Mental test score changes at kindergarten entry. *J. exper. Educ.*, 34:89-92. 69-70
- Bossard, J. H. S. (1954). *The sociology of child development*, rev. ed. New York: Harper. 108
- Bovard, E. W., Jr. (1951). The experimental production of interpersonal affect. *J. abnorm. soc. Psychol.*, 46:521-28. 399
- Brameld, R. (1950). *Patterns of educational philosophy*. Yonkers, N.Y.: World Book. (242)
- Breslow, A. P., and Leiser, F. (1954). *Some questions asked by student teachers*. Unpublished paper, San Francisco State College. 371
- Brewer, J. E., *see* Anderson and Brewer, and Anderson et al.
- Britton, J. H. (1954). Influence of social class upon performance on the Draw-a-Man Test. *J. educ. Psychol.*, 45:44-51. 477
- Bronfenbrenner, U. (1961). The changing American child—a speculative analysis. *J. soc. Issues*, 17(1):6-18. (125)
- Brooks, F. D., and Bassett, S. J. (1928). The retention of American history in the junior high school. *J. educ. Res.*, 18:195-202. 225
- Brown, B., *see* Deutsch and Brown.
- Brown, D. J., *see* Shaw and Brown.
- Brownell, W. A. (1934). The use of objective measures in evaluating instruction. *Educational Method*, 13:401-408. 440
- Bruce, W. F., and Holden, A. J., Jr. (1957). *The teacher's personal development*. New York: Holt. (645)
- Bruner, J. S. (1960). *The process of education*. Cambridge: Harvard Univ. Press. (277), 292, 299-300, (313)
- Bruner, J. S. (1961). The act of discovery. *Harvard educ. Rev.*, 31:21-32. 286

- Bruner, J. S. (1964). Some theorems on instruction illustrated with reference to mathematics. In E. R. Hilgard, ed., *Theories of learning and instruction*, 63rd Yearbook, National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press. 267-268
- Buchmueller, A. D., Porter, F., and Gildea, M. C.-L. (1949). A group therapy project with parents of behavior problem children in public schools. *Amer. J. Psychiat.*, 106:45-52. 181
- Buchmueller, A. D., Porter, F., and Gildea, M. C.-L. (1954). A group therapy project with parents of behavior problem children in public schools. *Nervous Child*, 10:415-24. 181
- Bugelski, B. R. (1956). *The psychology of learning*. New York: Holt. 306, (314), 325
- Bugelski, B. R. (1964). *The psychology of learning applied to teaching*. Indianapolis: Bobbs-Merrill. 306
- Bullis, H. E. (1952). An educational program for development of the "normal" personality, *Amer. J. Psychiat.*, 109:373-77. 407
- Bullis, H. E., and O'Malley, E. E. (1947). *Human relations in the classroom*. Wilmington: Delaware State Soc. for Mental Hygiene. 407
- Burchinal, L., Gardner, B., and Hawkins, G. R. (1958). Children's personality adjustment and the socio-economic status of their families. *J. genet. Psychol.*, 92:149-59. 192, 194
- Bureau of Educational Research, State of California (1952). *Evaluating pupil progress*. Sacramento: State Department of Education. 428
- Buros, O. K. (1965). *Sixth mental measurements yearbook*. Highland Park, N.J.: Gryphon Press. (499)
- Byrne, D., see Lindgren et al.
- Campbell, D. P. (1965). *The results of counseling: twenty-five years later*. Philadelphia: Saunders. (667)
- Campbell, J., see Dunnette et al.
- Canning, R. R. (1956). Does an honor system reduce classroom cheating? An experimental answer. *J. exper. Educ.*, 24:291-96. 202
- Cantor, N. (1953). *The teaching-learning process*. New York: Dryden. (242), (345)
- Carey, G. L. (1958). Sex differences in problem-solving performance as a function of attitude differences. *J. abnorm. soc. Psychol.*, 56:250-56. 294
- Carlson, R. (1963). Identification and personality structure in preadolescents. *J. abnorm. soc. Psychol.*, 67:566-73. 152
- Carlson, R. (1965). Stability and change in the adolescent's self-image. *Child Developmt.* 36:659-66. 139
- Carroll, H. A. (1955). Motivation and learning: their significance in a mental-health program for education. In N. B. Henry, ed., *Mental health in modern education*, 54th Yearbook of the National Soc. for the Study of Educ., Part II. Chicago: Univ. of Chicago Press. 597-598
- Carroll, J., see Becker et al.
- Carroll, J. B. (1963). Research on teaching foreign languages. In N. L. Gage, ed., *Handbook of research on teaching*. Chicago: Rand McNally. 386
- Case, H. W., see Roe et al.
- Castenada, A., see McCandless et al.
- Caterall, C. D., see Chamberlin and Caterall.
- Chamberlin, G. L., and Caterall, C. D. (1965). Acceleration for the overage potential dropout? *Phi Delta Kappan*, 45:98-99. 515
- Chambers, G. S., and Zabarenko, R. N. (1956). Effects of glutamic acid and social stimulation in mental deficiency. *J. abnorm. soc. Psychol.*, 53:315-20. 513
- Charles, D. C. (1953). Ability and accomplishment of persons earlier judged mentally deficient. *Genet. Psychol. Monogr.*, 47:3-71. 512
- Charles, D. C. (1965). *Psychology of the child in the classroom*. New York: Macmillan. (54)
- Charles, D. C., see also Baller and Charles.

References and Author Index

- Charters, W. W., and Gage, N. L., eds. (1963). *Readings in the social psychology of education*. Boston: Allyn and Bacon. (125), (166)
- Chatterjee, B. B., *see* Gage et al.
- Chauncey, D., and Dobbin, J. E. (1963). *Testing: its place in education today*. New York: Harper and Row. (463)
- Chilcott, J. V. (1959). Teacher role expectations for teacher behavior in the community. *Calif. J. educ. Res.*, 10:126 (Abstract). 636
- Clancy, N., and Smither, F. (1953). A study of emotionally disturbed children in Santa Barbara County schools. *Calif. J. educ. Res.*, 4:209-18. 98, 178
- Clark, R., *see* Beatty and Clark.
- Clark, W. W., *see* Thorpe et al.
- Clarke, H. H., and Olson, A. L. (1965). Characteristics of 15-year-old boys who demonstrate various accomplishments or difficulties. *Child Developmt.*, 36:559-67. 476
- Clifford, C., *see* Wattenberg and Clifford.
- Coffield, W. H., and Blommers, P. (1956). Effects of non-promotion on educational achievement in the elementary school. *J. educ. Psychol.*, 47:135-50. 514
- Cogan, M. L. (1954). *The relation of the behavior of teachers to the productive behavior of their pupils*. Unpublished Ed.D. dissertation, Harvard Univ. 319
- Cohen, L. D. (1954). Level-of-aspiration behavior and feelings of adequacy and self-acceptance. *J. abnorm. soc. Psychol.*, 49:84-86. 304
- Coladarsi, A. P. (1958). Educational psychology. In P. R. Farnsworth and Q. McNemar, eds., *Annual review of psychology*, vol. 9. Stanford: Annual Reviews. 303
- Coleman, J. S. (1965). *Adolescents and the schools*. New York: Basic Books. 140
- Collings, E. (1926). *An experiment with a project curriculum*. New York: Macmillan. 393
- Collister, E. C., *see* Kuhlen and Collister.
- Colville, F. M. (1957). The learning of motor skills as influenced by knowledge of mechanical principles. *J. educ. Psychol.*, 48:321-27. 232
- Combs, A. W., ed. (1962). *Perceiving, behaving, becoming: a new focus for education*. Yearbook of the Assoc. for Supervision and Curriculum Developmt. Washington, D.C., National Educ. Assn. (314)
- Combs, A. W. (1965). *The professional education of teachers: a perceptual view of teacher preparation*. Boston: Allyn and Bacon. 327, 339, 490-491, (645)
- Combs, A. W., et al. (1954). Human relations training for school administrators, Part I: The Syracuse Studies. *J. soc. Issues*, 10(2):5. 289-290
- Combs, A. W., and Snygg, D. (1959). *Individual behavior*, rev. ed. New York: Harper. 29, 44-45, (54), 269-270, (277), 291-292, (314)
- Combs, A. W., *see also* Snygg and Combs.
- Conner, J. D. (1951). An experiment in parent-teacher cooperation. *Calif. J. educ. Res.*, 2:99-103. 617
- Conrad, H. S., *see* Jones and Conrad.
- Cook, L. A. (1945). An experimental sociographic study of a stratified 10th grade class. *Amer. sociol. Rev.*, 10:250-61. 533
- Cook, L. A., and Cook, E. (1954). *Intergroup education*. New York: McGraw-Hill. (166), (421)
- Cook, L. A., and Cook, E. (1957). *School problems in human relations*. New York: McGraw-Hill. (421)
- Coon, C. L. (1915). *North Carolina schools and academies (1790-1840)*. Raleigh, N.C., Edwards and Broughton Printing Co. 204
- Coons, A. E., *see* Stogdill and Coons.
- Cooper, C. J. (1964). Some relationships between paired-associates learning and foreign-language aptitude. *J. educ. Psychol.*, 55:132-38. 297
- Costa, J., *see* Karelitz et al.

- Cowen, E. L., Zax, M., Klein, R., Izzo, L. D., and Trost, M. A. (1965). The relation of anxiety in school children to school record, achievement, and behavioral measures. *Child Developmt.*, 36:685-95. 182-183
- Cox, F. N. (1960). Correlates of general and text anxiety in children. *Austral. J. Psychol.*, 12: 169-77. 308
- Crandall, V. J., see Waters and Crandall, and Crandall et al.
- Crandall, V. W., Katkovsky, W., and Crandall, V. J. (1965). Children's beliefs in their own control of reinforcements in intellectual-academic achievement situations. *Child Developmt.*, 36: 91-109. 299, 304
- Cronbach, L. J. (1950). Educational psychology. In C. P. Stone and D. W. Taylor, eds., *Annual review of psychology*, vol. 1. Stanford: Annual Reviews. 18
- Cronbach, L. J. (1960). *Essentials of psychological testing*, 2nd ed. New York: Harper. (499)
- Cummins, R. E. (1957). *An evaluative study of certain teacher perceptions related to professional growth*. Unpublished doctoral dissertation, Univ. of Alabama. 635
- Cutts, N. E., and Mosely, N. (1957). *Teaching the disorderly pupil*. New York: Longmans, Green. (375)
- Dane, C. (1950). Some hints on student government. *Calif. J. sec. Educ.*, 25:149-54. 153
- Davidson, K., see Sarason et al.
- Davie, J. S. (1953). Social class factors and school attendance. *Harvard educ. Rev.*, 23:178-85. 121
- Davis, A. (1948). *Social-class influences upon learning*. Cambridge: Harvard Univ. Press. 529-530
- Davis, A. (1951). Socio-economic influences upon children's learning. *Understanding the Child*, 20:10-16. 476
- Davis, A., and Havighurst, R. J. (1947). *Father of the man*. Boston: Houghton Mifflin. 41
- Davis, A., see also Bloom et al.
- Davis, J. A. (1956). Differential college achievement of public vs. private school graduates. *J. counsel. Psychol.*, 3:72-73. 478
- De Cecco, J. P., ed. (1963). *Human learning in the school*. New York: Holt, Rinehart, and Winston. (54), (277), (463), (499)
- de Labry, J., see Zigler and de Labry.
- Delp, H. A. (1949). *Mental health problems in the elementary school*. Unpublished paper presented at the Institute on Mental Health for School Administrators, Center for Continuation Study, Univ. of Minnesota. 354-355
- Dembo, T., see Barker et al.
- Dennis, W. (1960). Causes of retardation among institutional children: Iran. *J. genet. Psychol.*, 96:47-59. 31, 84-85
- Dennis, W. (1966). The mental growth of certain foundlings before and after adoption. *Child Developmt.*, in press. 474
- Denny, T., Paterson, J., and Feldhusen, J. (1964). Anxiety and achievement as functions of daily testing. *J. educ. Measmt.*, 1:143-47. 475
- Deutsch, M., and Brown, B. (1964). Social influences in Negro-white intelligence differences. *J. soc. Issues*, 20(2):24-35. 550
- Dewey, J. (1903). *Ethical principles underlying education*. Chicago: Univ. of Chicago Press. 265-266
- Dewey, J. (1910). *How we think*. Boston: Heath. (277)
- Dewey, J. (1913). *Interest and effort in education*. Boston: Houghton Mifflin. (314)
- Dewey, J. (1916). *Democracy and education*. New York: Macmillan. (421)
- Dewey, J. (1940). My pedagogic creed (originally published in 1897). In *Education today*. New York: Putnam. (242), 266

References and Author Index

- Dewey, J. (1954). *The sources of a science of education*. New York: Harcourt, Brace. (23)
- Diamond, M. C., see Bennett et al.
- DiNapoli, P. J. (1937). *Homework in the New York City elementary schools*. New York: Bureau of Publications, Teachers College, Columbia Univ. 328
- Dinkmeyer, D. C. (1965). *Child development: the emerging self*. Englewood Cliffs, N.J.: Prentice-Hall. (90), (209)
- Dinkmeyer, D. C., and Dreikurs, R. (1963). *Encouraging children to learn: the encouragement process*. Englewood Cliffs, N.J.: Prentice-Hall. (209), (345)
- Dobbin, J. E., see Chauncey and Dobbin.
- Dodds, B. D. (1939). That all may learn. *Bull. Natl. Assn. sec. School Principals*, 23:164-65. 512
- Dohrenwend, B. S., and Dohrenwend, B. P. (1966). Stress situations, birth order, and psychological symptoms. *J. abnorm. Psychol.*, 71:215-23. 41
- Dolger, L., and Ginandes, J. (1946). Children's attitudes toward discipline as related to socioeconomic status. *J. exper. Educ.*, 15:161-65. 193
- Domke, H. R., see Mensh et al.
- Donahue, G. T., and Nichtern, S. (1965). *Teaching and the troubled child*. Glencoe, Ill.: Free Press. (539)
- Doty, B. A., and Doty, L. A. (1964). Programmed instructional effectiveness in relation to certain student characteristics. *J. educ. Psychol.*, 55:334-38. 253
- Douvan, E. (1956). Social status and success strivings. *J. abnorm. soc. Psychol.*, 52:219-23. 287
- Douvan, E., and Adelson, J. (1958). The psychodynamics of social mobility in adolescent boys. *J. abnorm. soc. Psychol.*, 56:31-44. 305
- Douvan, E., and Adelson, J. (1965). *The adolescent experience*. New York: Wiley. (166)
- Dreikurs, R. (1951). *Understanding the child: a manual for teachers*. Chicago: published by the author (mimeographed). 360
- Dreikurs, R. (1952a). *Character education and spiritual values in an anxious age*. Boston: Beacon Press. 410
- Dreikurs, R. (1952b) Understanding the exceptional child. In *Music therapy*. Chicago: National Assn. for Music Therapy. 509, 515, 536
- Dreikurs, R. (1957). *Psychology in the classroom*. New York: Harper. 160, 199-200, (209), (375)
- Dreikurs, R. (1958). Raising children in a democracy. *The Humanist*, 18:77-83. 330
- Dreikurs, R., see also Dinkmeyer and Dreikurs.
- Drews, E. M., ed. (1961). *Guidance for the academically talented student*. Washington: National Education Association and American Personnel and Guidance Assn. (539)
- Dunn, J. A., Bloom, R. D., and Morse, W. C. (1964). Multiple descriptions of classroom behavior via pupil report. *Psychol. Rep.*, 14:651-56. 415
- Dunnette, M. D., Campbell, J. and Jaastad, K. (1963). The effect of group participation on brainstorming effectiveness for two industrial samples. *J. appl. Psychol.*, 47:30-37. 399
- Durell, D. D. (1961). Implementing and evaluating pupil-team learning plans. *J. educ. Sociol.*, 34:360-65. 392
- Durflinger, G. W. (1956). The fundamentals forgotten by college students. *J. educ. Res.*, 49:571-79. 225-226
- Durost, W. N. (1954). Present progress and needed improvements in school evaluation. *Educ. psychol. Measmt.*, 14:247-54. 447
- Ebbinghaus, H. (1913). *Memory: a contribution to experimental psychology*. (Translated by H. A. Ruger and C. E. Bussenius.) New York: Teachers College, Columbia Univ. 269
- Ebel, R. L. (1951). Writing the test item. In E. F. Lindquist, ed., *Educational measurement*. Washington: American Council on Education. 439
- Ebel, R. L., ed., (1960). Inventories and tests. *Education*, 81:67-99. 449
- Ebel, R. L. (1965). *Measuring educational achievement*. Englewood Cliffs, N.J.: Prentice-Hall. (463)

References and Author Index

- Educational Policies Commission (1938). *The purpose of education in an American democracy*. Washington: National Education Assn. 70-71
- Educational Testing Service (1961). Judges disagree on the qualities that characterize good writing. *ETS Developments*, 9(2); February. 437
- Educational Testing Service (1963). Composition test shows high validity on reliable criterion of writing ability. *ETS Developments*, 11(1); January. 439
- Ehrlich, A. (1959). Effects of past experience on exploratory behavior in rats. *Canad. J. Psychol.*, 13:248-54. 39
- Eichorn, J. R., see Magary and Eichorn.
- Eid, S. K., see Al Omar et al.
- Eisenberg, L., see Rodriguez et al.
- Eiserer, P. E. (1963). *The school psychologist*. New York: Center for Applied Research in Psychology. (608)
- Elkin, F. (1960). *The child and society*. New York: Random House. (125)
- Elkins, D. (1958). Some factors related to the choice-status of ninety eighth-grade children in a school society. *Genet. Psychol. Monogr.*, 58:207-72. 147, 521
- Ellena, W. J., see Biddle and Ellena.
- Ellis, A. (1949). Results of a mental hygiene approach to reading disability problems. *J. consult. Psychol.*, 13:56-61. 528
- Englehart, M. D. (1964). *Improving classroom testing*. Washington: Natl. Educ. Assn. (463)
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton. (90)
- Erikson, E. H. (1959). Identity and the life cycle: selected papers. *Psychol. Issues*, 1: No. 1. 77-78, 89
- Erikson, E. H. (1960). Youth and the life cycle: an interview. *Children*, 7(2):43-49. (90)
- Farquhar, W. W., see Green and Farquhar.
- Farwell, G. F., and Peters, H. J., eds. (1960). *Guidance readings for counselors*. Chicago: Rand McNally. (608)
- Fea, H. R., see Russell and Fea.
- Feldhusen, J. F., and Klausmeier, H. J. (1962). Anxiety, intelligence, and achievement in children of low, average, and high intelligence. *Child Developmt.*, 33:403-409. 308
- Feldhusen, J. F., and Thurston, J. R. (1964). Personality and adjustment of high and low anxious children. *J. educ. Res.*, 57:265-67. 177
- Feldhusen, J., see also Denny et al.
- Ferreira, J. R., see Johnson and Ferreira.
- Feshbach, S., see Janis and Feshbach.
- Fifer, G. (1952). Grade placement of secondary school pupils in relation to age and ability. *Calif. J. educ. Res.*, 3:31-36. 195
- Finger, J. A., and Schlessner, G. E. (1963). Academic performance of public and private school students. *J. educ. Psychol.*, 54:118-22. 478
- Fisichelli, V., see Karelitz and Fisichelli.
- FitzSimons, M. J. (1958). The predictive values of teachers' referrals. In M. Krugman, ed., *Orthopsychiatry and the school*. New York: American Orthopsychiatric Assn. 534
- Flanders, N. A. (1951). Personal-social anxiety as a factor in experimental learning. *J. educ. Res.*, 45:100-10. 368
- Flanders, N. A. (1960). *Teacher influence, pupil attitudes, and achievement*. U.S. Office of Education, Cooperative Research Project No. 397. Minneapolis: Univ. of Minnesota. 331
- Flanders, N. A., and Havumaki, S. (1960). Group compliance to dominative teacher influence. *Hum. Relat.*, 13:67-82. 323
- Flavell, J. H. (1963). *The developmental psychology of Jean Piaget*. Princeton, N.J.: Van Nostrand. 68, (90)
- Force, D. G., Jr., see Garrison and Force.

References and Author Index

- Forrester, B. J., *see* Gray et al.
- Foster, J. T., *see* Metfessel and Foster.
- Fowler, H. (1965). *Curiosity and exploratory behavior*. New York: Macmillan. (54)
- Fowler, W. L. (1957). A comparative analysis of pupil performance on conventional and culture-controlled mental tests. *14th yearbook*, National Council on Measurements Used in Education. 477
- Franzblau, R. N. (1935). Race differences in mental and physical traits: studied in different environments. *Archives of Psychology* (New York), No. 177. 40
- Freeman, F. N. (1962). *Theory and practice of psychological testing*, 3rd ed. New York: Holt, Rinehart, and Winston. (499)
- Freeman, M., *see* Kagan and Freeman.
- Friesen, W. V., *see* Kounin et al.
- Froehlich, C. P., and Moser, W. E. (1954). Do counselees remember test scores? *J. counsel. Psychol.*, 1:149-52. 229
- Fullagar, W. A., Lewis, H. G., and Cumbee, C. F., eds. (1964). *Readings for educational psychology*, rev. ed. New York: Crowell. (277), (314)
- Fund for the Advancement of Education (1957). *They went to college early*. New York: Fund for the Advancement of Education. 519
- Gabriel, J. (1964). *Children growing up: the development of children's personalities*. London: Univ. of London Press. (90)
- Gage, N. L., Runkel, P. J., and Chatterjee, B. B. (1960). *Equilibrium theory and behavior change: an experiment in feedback from pupils to teachers*. Urbana: Bureau of Educational Research, Univ. of Illinois. 433
- Gage, N. L., *see also* Charters and Gage.
- Gaier, E. L., *see* Morgan and Gaier.
- Gallagher, J. J., and Aschner, M. J. M. (1963). A preliminary report: analyses of classroom interaction. *Merrill-Palmer Quart.*, 9:183-94. 319
- Gardner, B., *see* Burchinal et al.
- Garrison, K. C., and Force, D. G., Jr. (1959). *Psychology of exceptional children*, 3rd ed. New York: Ronald Press. (539)
- Garverick, C. M., *see* Sassenrath and Garverick.
- Gelfond, A. (1952). *The relationship of the onset of pubescence to certain interpersonal attitudes in girls*. Unpublished doctoral dissertation, New York Univ. 141
- Gesell, A., et al. (1940). *The first five years of life*. New York: Harper. 65-67, 471
- Gesell, A., et al. (1943). *Infant and child in the culture of today*. New York: Harper. 65-67, 471
- Getzels, J. W., and Jackson, P. W. (1962). *Creativity and intelligence*. New York: Wiley. 493, (499)
- Getzels, J. W., *see also* Jackson and Getzels.
- Gildea, M. C.-L., *see* Buchmueller et al., and Mensh et al.
- Ginandes, J., *see* Dolger and Ginandes.
- Ginzberg, E. et al. (1959). *The ineffective soldier. Vol. 3. Patterns of performance*. New York: Columbia Univ. Press. 69
- Ginzberg, E., ed. (1960). *The Nation's children. Vol. 1. The family and social change*. New York: Columbia Univ. Press. (125)
- Glidwell, J. C., *see* Mensh et al.
- Glock, M. D., *see* Ahmann and Glock.
- Glueck, S. (1953). The home, the school, and delinquency. *Harvard Educ. Rev.*, 23:17-32. 531
- Glueck, S., and Glueck, E. T. (1950). *Unravelling juvenile delinquency*. New York: Commonwealth Fund. 530-531
- Gnagey, W. J., *see* Ofchus and Gnagey.

References and Author Index

- Goldberg, M. H., and Maccoby, E. H. (1965). Children's acquisition of skill in performing a group task under two conditions of group formation. *J. pers. soc. Psychol.*, 2:898-902. 138
- Goldman, M., see Ausubel et al.
- Goodenough, E. W. (1957). Interest in persons as an aspect of sex difference in the early years. *Genet. Psychol. Monogr.*, 55:287-323. 197
- Goodlad, J. I. (1954). Some effects of promotion and nonpromotion upon the social and personal adjustment of children. *J. exper. Educ.*, 22:301-28. 514
- Goodlad, J. I. (1960). Classroom organization. In C. W. Harris, ed., *Encyclopedia of educational research*, 3rd ed. New York: Macmillan. 520
- Goodlad, J. I., ed. (1966). *The changing American school*. 65th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (23)
- Goodlad, J. I., and Anderson, R. H. (1959). *The nongraded elementary school*. New York: Harcourt, Brace, and World. (539)
- Gordon, H. (1923). *Mental and scholastic tests among retarded children: an inquiry into the effects of schooling on various tests*. Educational pamphlet No. 44. London: Board of Education. 68-69
- Gordon, L. V., see Mooney and Gordon.
- Gottlieb, D. (1962). Social class, achievement, and the college-going experience. *School Rev.*, 70:273-86. 559
- Gottsegen, M. G., and Gottsegen, G. B., eds. (1960). *Professional school psychology*. New York: Grune and Stratton. (608)
- Gough, H. G. (1964). Academic achievement in high school as predicted from the California Psychological Inventory. *J. educ. Psychol.*, 55:174-80. 298
- Gouldner, A. W., ed. (1950). *Studies in leadership*. New York: Harper. (345)
- Gowan, J. C. (1957). A summary of the intensive study of twenty highly selected elementary women teachers. *J. exper. Educ.*, 26:115-24. 638
- Grace, G. L. (1948). The relation of personality characteristics and response to verbal approval in a learning task. *Genet. Psychol. Monogr.*, 37:73-103. 220
- Grambs, J. D. (1952). *Group processes in intergroup education*. New York: National Conference of Christians and Jews. 163, 396-398, 403, (421)
- Gray, S. W. (1959). Psychologists for the public schools: a training program. *Amer. Psychologist*, 14:701-704. 582-583, (608)
- Gray, S. W., and Klaus, R. A. (1965a). An experimental preschool program for culturally deprived children. *Child Developmt.*, 36:887-98. 561-569, 572
- Gray, S. W., Klaus, R. A., Miller, J. O., and Forrester, B. J. (1965b). *The Early Training Project: a handbook of aims and activities*. Nashville and Murfreesboro, Tenn.: George Peabody College for Teachers and Murfreesboro City Schools. 561-569, (575)
- Green, D. R. (1954). Teaching methods and performance on a test of cancer knowledge in medical schools. *Calif. J. educ. Res.*, 5:188. 335
- Green, R. L., and Farquhar, W. W. (1965). Negro achievement motivation and scholastic achievement. *J. educ. Psychol.*, 56:241-43. 558
- Green, R. L., and Hofmann, L. J. (1965). A case study of the effects of educational deprivation on Southern rural Negro children. *J. Negro Educ.*, 34:327-41. 556-557
- Greenburg, S. W., see Popham and Greenburg.
- Greulich, W. W. (1950). Rationale of assessing the developmental status of children from roentgenograms of the hand and wrist. *Child Developmt.*, 21:33-44. 63
- Gronlund, N. E. (1951). *The accuracy of teachers' judgments concerning the sociometric status of sixth-grade pupils*. Beacon, New York: Beacon House. 145
- Gronlund, N. E. (1959). *Sociometry in the classroom*. New York: Harper. (166)
- Gronlund, N. E. (1965). *Measurement and evaluation in teaching*. New York: Macmillan. (464)

References and Author Index

- Gronlund, N. E., and Whitney, A. P. (1958). The relation between teachers' judgments of pupils' sociometric status and intelligence. *El. School J.*, 58:264-68. 146
- Gross, N. (1958). *Who runs our schools?* New York: Wiley. 618
- Grossack, M. M. (1954). Some effects of cooperation and competition upon small group behavior. *J. abnorm. soc. Psychol.*, 49:341-48. 159
- Grotberg, E. H. (1965). The Washington program in action. *Education*, 85:490-94. 571
- Grubb, J., see Shaw and Grubb.
- Guedes, H. de A., see Lindgren and Guedes.
- Guilford, J. P. (1927). The role of form in learning. *J. exper. Psychol.*, 10:415-23. 301
- Guilford, J. P. (1959). Three faces of intellect. *Amer. Psychologist*, 14:469-79. 492
- Guilford, J. P., and Hoepfner, R. (1965). *The relation of creative potential to IQ*. Unpublished paper read at the annual convention of the American Psychological Assn. 494
- Gump, P. V., and Kounin, J. S. (1957). Effects of teachers' methods of controlling misconduct upon kindergarten children. *Amer. Psychologist*, 12:296 (Abstract). 359
- Gump, P. V., see also Kounin et al.
- Gunderson, D. V., see Jewett et al.
- Guthrie, J. W., and Kelly, J. A. (1965). Compensatory education—some answers for a skeptic. *Phi Delta Kappan*, 47:70-74. 544-545
- Hagen, E., see Thorndike and Hagen.
- Haggard, E. A. (1954). The proper concern of educational psychologists. *Amer. Psychologist*, 9:539-43. 260
- Hagman, R. R. (1930). A study of fears in children of preschool age. *J. exper. Educ.*, 1:110-30. 101
- Hanna, L. A., see Quillen and Hanna.
- Haring, N. G., see Phillips et al.
- Harris, D. B. (1957). A scale for measuring attitudes of social responsibility in children. *J. abnorm. soc. Psychol.*, 55:322-26. 73
- Harris, T. L., and Schwahn, W. E. (1961). *Selected readings on the learning process*. N.Y.: Oxford Univ. Press. (277)
- Hartley, R. E. (1959). Sex-role pressures and the socialization of the male child. *Psychol. Rep.*, 5:457-68. 197
- Haselrud, G. M., and Meyers, S. (1959). The transfer value of given and individually derived principles. *J. educ. Psychol.*, 49:293-98. 271
- Hathaway, S. R., and Monachesi, E. D. (1952). The Minnesota Multiphasic Personality Inventory in the study of juvenile delinquents. *Amer. sociol. Rev.*, 17:704-10. 195
- Hathaway, W. P. (1959). *Education and health of the partially seeing child*. New York: Columbia Univ. Press. (539)
- Havighurst, R. J. (1953). *Human development and education*. New York: Longmans, Green. 86-87
- Havighurst, R. J. (1961). Social-class influences on American education. In N. B. Henry, ed., *Social forces influencing American education*. 60th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (126)
- Havighurst, R. J., Bowman, P. H., Liddle, G. P., Matthews, C. V., and Pierce, J. V. (1962). *Growing up in River City*. New York: Wiley. (126)
- Havighurst, R. J., and Neugarten, B. L. (1957). *Society and education*. Boston: Allyn and Bacon. 111
- Havighurst, R. J., and Taba, H. (1949). *Adolescent character and personality*. New York: Wiley. 112, 114
- Havighurst, R. J., see also Davis and Havighurst, and Warner et al.
- Havumaki, S., see Flanders and Havumaki.
- Hawkins, G. R., see Burchinal et al.

References and Author Index

- Haythorn, W. (1953). Influence of individual members on the characteristics of small groups. *J. abnorm. soc. Psychol.*, 48:276-84. 159
- Heathers, G. (1955). Emotional dependence and independence in nursery school play. *J. genet. Psychol.*, 87:37-57. 73
- Hebb, D. O. (1955). Drives and the C. N. S. (Conceptual nervous system). *Psychol. Rev.*, 62: 243-54. 326
- Heise, G. A., and Miller, G. A. (1951). Problem solving by small groups using various communication nets. *J. abnorm. soc. Psychol.*, 46:327-335. 337
- Helper, M. M. (1958). Parental evaluations of children and children's self-evaluations. *J. abnorm. soc. Psychol.*, 56:190-94. 105
- Henning, C. J. (1949). Discipline: are school practices changing? *Clearing House*, 23:266-73. 357
- Henry, J. (1963). *Culture against man*. New York: Random House. 551
- Henry, N. B., ed. (1950). *The education of exceptional children*. 49th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (539)
- Henry, N. B., ed. (1955). *Modern philosophies and education*. 54th yearbook of the National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press. (242)
- Henry, N. B., ed. (1955). *Mental health in modern education*. 54th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (209)
- Henry, N. B., ed. (1958). *Education for the gifted child*. 57th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (539)
- Henry, N. B., ed. (1959). *Personnel services in education*. 58th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (608)
- Henry, N. B., ed. (1960). *The dynamics of instructional groups: socio-psychological aspects of teaching and learning*. 59th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (421)
- Henry, N. B., ed. (1961). *Social forces influencing American education*. 60th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (345)
- Henry, N. B., and Richey, H. G., eds. (1963). *The impact and improvement of school testing programs*. 62nd yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (464)
- Hensarling, P. R., see Barker and Hensarling.
- Hess, R. D. (1964). Educability and rehabilitation: the future of the welfare class. *J. Marriage Fam.*, 26:422-29. 115
- Hess, R. D., see also Bloom et al.
- Highet, G. (1950). *The art of teaching*. New York: Knopf. (242)
- Hightower, N. C., see Smith and Hightower.
- Hilgard, E. R., ed. (1964). *Theories of learning and instruction*. 63rd yearbook of the National Society for the Study of Learning, Part I. Chicago: Univ. of Chicago Press. (277)
- Hill, R. (1960). The American family today. In E. Ginzberg, ed., *The nation's children. I. The family and social change*. New York: Columbia Univ. Press. 98
- Hilton, T. L., see Levin et al.
- Hobson, J. R. (1963). High school performance of underage pupils initially admitted to kindergarten on the basis of physical and psychological examinations. *Educ. Psychol. Measmt.*, 23: 159-70. 520
- Hoepfner, R., see Guilford and Hoepfner.
- Hoffman, L. R., and Maier, N. R. F. (1961). Quality and acceptance of problem solutions by members of homogeneous and heterogeneous groups. *J. abnorm. soc. Psychol.*, 62:401-407. 138
- Hoffman, M. L., Mitsos, S. B., and Protz, R. E. (1958). Achievement striving, social class, and test anxiety. *J. abnorm. soc. Psychol.*, 56:401-403. 287

References and Author Index

- Hofmann, L. J., *see* Green and Hofmann.
- Holden, A. J., Jr., *see* Bruce and Holden.
- Holland, J. L. (1959). Some limitations of teacher rating as predictors of creativity. *J. educ. Psychol.*, 50:219-23. 493
- Hollingshead, A. B. (1949). *Elmtown's youth*. New York: Wiley. 113, 119, 121, 123, (126)
- Hollister, W. G. (1959). Current trends in mental health programming in the classroom. *J. soc. Issues*, 15(1):50-58. 205-206
- Honzik, M. (1948). The stability of mental test performance between 2 and 18 years. *J. exper. Educ.*, 17:309-24. 472
- Horowitz, M. M. (1959). The teacher utilizes group forces. In *Learning and the teacher*, yearbook of the Association for Supervision and Curriculum Development. Washington: National Education Assn. (421)
- Horton, R. E., and Remmers, H. H. (1953). Youth views current issues in education. *Purdue Opinion Panel*, 12(1); November. 202
- Howard, C. F. (1950). Three methods of teaching arithmetic. *Calif. J. educ. Res.*, 1:25-29. 384
- Howell, M. (1951). Spelling through written expression. *El. School J.*, 52:207-14. 272
- Hoyt, F. S. (1906). Studies in the teaching of English grammar. *Teachers College Record*, 7:467-500. 225
- Hughes, M. M. (1950). Training pupils for successful group living. *El. School J.*, 50:453-59. 158
- Hunnicutt, C. W. (1949). *Selecting tomorrow's experience: liberal or authoritarian?* The J. Richard Street Lecture for 1949. Syracuse: Syracuse Univ. Press. 350-351
- Hunter, E., and Amidon, E. J. (1964). *Student teaching: cases and comments*. New York: Holt, Rinehart, and Winston. (645)
- Hurlock, E. B. (1925). Evaluation of certain incentives used in school work. *J. educ. Psychol.*, 16:145-59. 220, 236
- Hyman, H., *see* Katz and Hyman.
- Information and Education Division, U.S. War Department (1947). The effects of presenting "one side" versus "both sides" in changing opinions on a controversial subject. In T. M. Newcomb and E. L. Hartley, eds., *Readings in social psychology*. New York: Holt. 155
- Ingram, C. P. (1960). *Education of the slow-learning child*, 3rd ed. New York: Ronald. (539)
- Inhelder, B., *see* Piaget and Inhelder.
- Iscoc, I., *see* Semler and Iscoe.
- Izzo, L. D., *see* Cowen et al.
- Jaastad, K., *see* Dunnette et al.
- Jackson, P. W., and Getzels, J. W. (1959). Psychological health and classroom functioning: a study of dissatisfaction with school among adolescents. *J. educ. Psychol.*, 50:295-300. 197
- Jackson, P. W., *see also* Getzels and Jackson.
- Jacob, P. E., *see* Riesman et al.
- Jacobs, J. N., and Bollenbacher, J. K. (1959). An experimental study of the effectiveness of television versus classroom instruction in sixth grade in the Cincinnati public schools. *J. educ. Res.*, 52:184-89. 385
- Jacobson, F. N., Rettig, and Pasamanick, B. (1959). Status, job satisfaction, and factors of job satisfaction of state institution and clinic psychologists. *Amer. Psychologist*, 14:144-50. 636
- Janis, I. L., and Feshbach (1953). Effects of fear-arousing communications. *J. abnorm. soc. Psychol.*, 48:78-92. 310
- Jantzen, J. M. (1959). An opinionaire on why college students choose to teach. *J. educ. Res.*, 55:13-17. 639

References and Author Index

- Jennings, H. H. (1948). *Sociometry in group relations*. Washington: American Council on Education. 137
- Jennings, H. H. (1959). *Sociometry in group relations*, rev. ed. Washington: American Council on Education. (166)
- Jersild, A. (1952). *In search of self*. New York: Bureau of Publications, Teachers College, Columbia Univ. (54)
- Jersild, A. T., et al. (1941). Studies of elementary school classes in action. II. Pupil participation and aspects of pupil-teacher relationships. *J. exper. Educ.*, 10:119-37. 402
- Jersild, A. T., and Tasch, R. J. (1949). *Children's interests and what they suggest for education*. New York: Bureau of Publications, Teachers College, Columbia Univ. 74
- Jewett, A., Mersand, J., and Gunderson, D. V., eds. (1964). *Improving English skills for culturally different youth in large cities*. Washington: U.S. Office of Education. (575)
- Jex, F. B. (1963). Negative validities for two different ingenuity tests. In C. W. Taylor and F. Barron, eds., *Scientific creativity: its recognition and development*. New York: Wiley. 496
- Johnson, C. J., and Ferreira, J. R. (1958). School attitudes of children in special classes for mentally retarded. *Calif. J. educ. Res.*, 9:33-37. 513
- Johnson, L. V., see Bany and Johnson.
- Johnson, R. C., and Medinnus, G. R. (1965). *Child psychology: behavior and development*. New York: Wiley. (90)
- Johnson, W. (1946). *People in quandaries*. New York: Harper. 525
- Jones, H. E., and Conrad, H. S. (1944). Mental development in adolescence. In N. B. Henry, ed., *Adolescence*, 43rd yearbook of the National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press. 472
- Jones, H. E., see also Pinneau and Jones.
- Jones, M. C., and Bayley, N. (1950). Physical maturing among boys as related to behavior. *J. educ. Psychol.*, 41:129-48. 84
- Jones, M. C., and Mussen, P. (1958). Self-conceptions, motivations, and interpersonal attitudes of early- and late-maturing girls. *Child Developmt.*, 29:491-501. 84
- Jones, R. E., see Steininger et al.
- Kagan, J., and Freeman, M. (1963). Relation of childhood intelligence, maternal behaviors, and social class to behavior during adolescence. *Child Developmt.*, 34:899-911. 104
- Kantor, M. B., see Mensh et al.
- Kanzer, P., see Zigler and Kanzer.
- Kaplan, L. (1952). The annoyances of elementary school teachers. *J. educ. Res.*, 45:649-66. 13
- Kaplan, L. (1959). *Mental health and human relations in education*. New York: Harper. (210), (375), (645)
- Karelitz, S., Fisichelli, V., Costa, J., Karelitz, R., and Rosenfield, L. (1964). Relationship of crying activity in early infancy to speech and intellectual development at age three years. *Child Developmt.*, 35:769-77. 96
- Katz, D., and Hyman, H. (1947). Morale in war industries. In T. M. Newcomb and E. L. Hartley, eds., *Readings in social psychology*. New York: Holt. 155
- Kaufman, B. (1964). *Up the down staircase*. Englewood Cliffs, N.J.: Prentice-Hall. (364)
- Kearney, N. C., see Rocchio and Kearney.
- Keen, R., see Stevenson and Keen.
- Keliher, A. V. (1938). *Life and growth*. New York: Appleton-Century-Crofts. 81
- Keliher, A. V. (1936). Some developmental factors in children . . . two to eight. In *Growth and development: the basis for educational programs*. New York: Progressive Education Association. 336
- Kelley, E. C. (1947). *Education for what is real*. New York: Harper. (242)
- Kelley, E. C. (1954). What are children learning? *Childhood Educ.*, 31:9-12. 224, 240

References and Author Index

- Kelley, E. C., and Rasey, M. I. (1952). *Education and the nature of man*. New York: Harper. (314)
- Kelley, J. A., see Guthrie and Kelley.
- Kerber, A., and Bommarito, B., eds. (1965). *The schools and the urban crisis*. New York: Holt, Rinehart, and Winston. (575)
- Kersh, B. Y. (1958). The adequacy of "meaning" as an explanation for the superiority of learning by independent discovery. *J. educ. Psychol.*, 49:282-92. 231, 326
- Kersh, B. Y. (1962). The motivating effect of learning by directed discovery. *J. educ. Psychol.*, 53:65-71. 232
- Kessen, W., ed. (1965). *The child*. New York: Wiley. (90)
- Kirts, D. K., see Steininger et al.
- Kitzhaber, A. R. (1963). *Themes, theories, and therapy: the teaching of writing in college*. New York: McGraw-Hill. 226-227
- Klaus, R. A., see Gray and Klaus, and Gray et al.
- Klausmeier, H. J. (1963). Effects of accelerating bright older elementary pupils: a follow up. *J. educ. Psychol.*, 54:165-71. 519
- Klausmeier, H. J., see also Feldhusen and Klausmeier.
- Klein, R., see Cowen et al.
- Gluckhohn, C. (1949). *Mirror for man*. New York: McGraw-Hill. 41
- Gluckhohn, C., and Murray, H. A. (1953). Personality formation: the determinants. In C. Gluckhohn et al., eds., *Personality in nature, society, and culture*, 2nd ed. New York: Knopf. 96
- Knapp, R. R. (1960). The effect of time limits on the intelligence test performance of Mexican and American subjects. *J. educ. Psychol.*, 51:14-20. 477
- Knights, R. M., see Stevenson et al.
- Koch, H. L. (1955). Some personality correlates of sex, sibling position, and sex of sibling among five- and six-year-old children. *Genet. Psychol. Monogr.*, 52:3-50. 41
- Koff, R. H. (1965). Systematic changes in children's word-association norms 1916-63. *Child Developmt.*, 36:299-305. 75
- Kohn, M. L. (1959). Social class and parental values. *Amer. J. Sociol.*, 64:337-51. 116-117
- Kolb, D. A. (1965). Achievement motivation for underachieving high-school boys. *J. pers. soc. Psychol.*, 2:783-92. 481
- Korchin, S. J., and Levine, S. (1957). Anxiety and verbal learning. *J. abnorm. soc. Psychol.*, 54: 234-40. 309-310
- Kounin, J. S., Friesen, W. V., and Norton, A. E. (1966). Managing emotionally disturbed children in regular classrooms. *J. educ. Psychol.*, 57:1-13. 536
- Kounin, J. S., and Gump, P. V. (1961). The comparative influence of punitive and non-punitive teachers upon children's concepts of school misconduct. *J. educ. Psychol.*, 52:44-49. 358
- Kounin, J. S., Gump, P. V., and Biddle, B. J. (1957). The comparative influence of home, school, and camp upon children's concepts of misconduct. *Amer. Psychologist*, 12:396-97 (Abstract). 369
- Kounin, J. S., see also Gump and Kounin.
- Krech, D., see Bennett et al.
- Krugman, M., ed. (1958). *Orthopsychiatry and the school*. New York: American Orthopsychiatric Assn. (209)
- Kubie, L. S. (1958). *Neurotic distortion of the creative process*. Lawrence: Univ. of Kansas Press. (314)
- Kuder, G. F. (1951). *Examiner manual for the Kuder Preference Record, Vocational—Form C*. Chicago: Science Research. 622
- Kuhlen, R. G., and Collister, E. C. (1952). Sociometric status of sixth and ninth-graders who fail to finish high school. *Educ. psychol. Measmt.*, 12:632-37. 142

- Landes, R. (1965). *Culture in American education*. New York: Wiley. (126), (575)
- Layton, E. T. (1932). The persistence of learning in elementary algebra. *J. educ. Psychol.*, 23: 46-55. 225
- Lebo, D., *see* Smith and Lebo.
- Lee, D. (1955). Discrepancies in the teaching of American culture. In G. D. Spindler, ed., *Education and anthropology*. Stanford: Stanford Univ. Press. 106
- Lee, E. A., and Thorpe, L. P. (1946). *Occupational interest inventory*. Monterey: California Test Bureau. 486
- Lee, E. S. (1951). Negro intelligence and selective migration: a Philadelphia test of the Klineberg hypothesis. *Amer. sociol. Rev.*, 16:227-33. 555
- Lee, G. C. (1966). The changing role of the teacher. In J. I. Goodlad, ed., *The changing American school*, 65th yearbook of the National Society for the Study of Education, Part II. 613, (645)
- Leiderman, G. F., *see* Levin et al.
- Leiser, F., *see* Breslow and Leiser.
- Lerner, M. J., *see* Becker et al.
- Levin, H., Hilton, T. L., and Leiderman, G. F. (1957). Studies of teacher behavior. *J. exper. Educ.*, 26:81-91. 638, 640
- Levin, H., *see also* Sears et al.
- Levitt, E. E., *see* Ojemann et al.
- Lewin, H. S. (1953). Facts and fears about the comics. *Nation's Schools*, 52:46-48. 248
- Lewin, K. (1958). Group decision and social change. In E. E. Maccoby et al., eds., *Readings in social psychology*, 3rd ed. New York: Holt. 331-333
- Lewin, K., Lippitt, R., and White, R. K. (1939). Patterns of aggressive behavior in experimentally created "social climates." *J. soc. Psychol.*, 10:271-99. 102, 264, 266, 319
- Lewin, K., *see also* Barker et al.
- Lewis, H. H. (1951). A county guidance department looks at its problem behavior children. *Calif. J. educ. Res.*, 2:32-35. 177
- Liddle, G. (1958a). The California Psychological Inventory and certain social and personal factors. *J. educ. Psychol.*, 49:144-49. 116
- Liddle, G. (1958b). Overlap among desirable and undesirable characteristics in gifted children. *J. educ. Psychol.*, 49:219-23. 475
- Lieberman, M. (1961). The influence of teachers' organizations upon American education. In N. B. Henry, ed., *Social forces influencing American education*, 60th yearbook of the National Society for the Study of Education, Part II. (645)
- Lighthall, F. F., *see* Sarason et al.
- Lindberg, L. (1954). *The democratic classroom: a guide for teachers*. New York: Bureau of Publications, Teachers College, Columbia Univ. (421)
- Lindgren, H. C. (1954). *Mental health in education*. New York: Holt. (210), (242), (464), 619, (645)
- Lindgren, H. C. (1961). Correlates of attitudes toward child-centered practices in education. *Psychol. Rep.*, 9:440. 626
- Lindgren, H. C. (1962). Authoritarianism, independence, and child-centered practices in education. *Psychol. Rep.*, 10:747-50. 626
- Lindgren, H. C. (1964). *Psychology of personal development*. New York: American Book. (54), (210)
- Lindgren, H. C., Byrne, D., and Petrinovich, L. (1966). *Psychology: an introduction to a behavioral science*. New York: Wiley. (277), (499)
- Lindgren, H. C., and Guedes, H. de A. (1963). Social status, intelligence, and educational achievement among elementary and secondary students in São Paulo, Brazil. *J. soc. Psychol.*, 60:9-14. 119

References and Author Index

- Lindgren, H. C., and Lindgren, F. (1965a). Brainstorming and orneriness as facilitators of creativity. *Psychol. Rep.*, 16:577-83. 399, 493, 495
- Lindgren, H. C., and Lindgren, F. (1965b). Creativity, brainstorming, and orneriness: a cross-cultural study. *J. soc. Psychol.*, 67:23-30. 299, 493, 495
- Lindgren, H. C., and Patton, G. M. (1958). Attitudes of high school and other teachers toward children and current educational methodology. *Calif. J. educ. Res.*, 9:80-85. 411-412
- Lindgren, H. C., and Singer, E. (1963). Correlates of Brazilian and North American attitudes toward child-centered practices in education. *J. soc. Psychol.*, 60:3-7. 626
- Lindgren, H. C., see also Al Omar et al.
- Lindholm, B. W. (1964). Changes in conventional and deviation IQs. *J. educ. Psychol.*, 55:110-13. 473-474
- Lippitt, R., see Lewin et al., and White and Lippitt.
- Lipton, R. C., see Provence and Lipton.
- Livson, N., see Borum and Livson.
- Locke, E. A. (1963). Some correlates of classroom and out-of-class achievement in gifted science students. *J. educ. Psychol.*, 54:238-48. 297-298
- Lodge, W. J. (1951). Classroom cheating—a measure of children's character or teacher attitudes? *Calif. J. educ. Res.*, 2:63-66. 331
- Loeb, M. B., see Warner et al.
- Long, J., see Rosenzweig and Long.
- Lovos, G., and Norton, V. (1962). Teaching the barely educable: the Cupertino story. *Phi Delta Kappan*, 43:391-94. 514
- Lublin, S. C. (1965). Reinforcement schedules, scholastic aptitude, autonomy need, and achievement in a programmed course. *J. educ. Psychol.*, 56:295-302. 259
- Luchins, A. S. (1952). Mechanization in problem solving. The effect of *Einstellung*. *Psychol. Monogr.*, No. 54. 336
- Luchins, A. S., and Luchins, E. H. (1948). Children's attitudes toward homogeneous groupings. *J. genet. Psychol.*, 72:3-9. 521
- Lunt, P. S., see Warner and Lunt.
- Lyle, W. H., Jr., see Ojemann et al.
- Lyman, H. B. (1963). *Test scores and what they mean*. Englewood Cliffs, N.J.: Prentice-Hall. (464)
- Maas, H. S. (1951). Some social class differences in the family system and group relations of pre- and early adolescents. *Child Developmt.*, 22:145-52. 192
- Maccoby, E. E., see Sears et al., and Goldberg and Maccoby.
- Macfarlane, J. W. (1943). Study of personality development. In R. G. Barker et al., eds. *Child behavior and development*. New York: McGraw-Hill. 180
- Magary, J. F., and Eichorn, J. R., eds. (1960). *The exceptional child*. New York: Holt, Rinehart, and Winston. (540)
- Maher, B., see Spence and Maher.
- Mahler, C., and Smullenburg, H. (1963). Effects of testing programs on the attitudes of students, teachers, parents, and the community. In N. B. Henry and H. G. Richey, eds., *The impact and improvement of school testing programs*, 62nd yearbook of the National Society for the Study of Education, Part II. 458, 492
- Maida, P. R., see Bealer et al.
- Maier, H. W. (1965). *Three theories of child development*. New York: Harper and Row. (90)
- Maier, N. R. F., see Hoffman and Maier.
- Majdalani, M., see Al Omar et al.
- Mandler, G., see Sarason, S. B. (1952) A study of anxiety and learning. *J. abnorm. soc. Psychol.*, 47:166-73. 310

References and Author Index

- Margolin, R. J. (1953). New perspectives for teachers—an evaluation of a mental-health institute. *Ment. Hyg.*, 37:394-24. 635
- Marshall, H. R. (1958). Prediction of social acceptance in community youth groups. *Child Development*, 29:171-84. 73
- Masling, J. M., *see* Stern and Masling.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper. 32, (55)
- May, R. (1950). *The meaning of anxiety*. New York: Ronald. 129
- McArthur, C. (1957). Upper-class intelligence as the critical case for a theory of "middle-class bias." *J. counsel. Psychol.*, 4:23-28. 478
- McCandless, B. R. (1961). *Children and adolescents*. New York: Holt, Rinehart, and Winston. (90), 111, (126)
- McCandless, B. R., Castenada, A., and Palermo, D. S. (1956). Anxiety in children and social status. *Child Development*, 27:385-91. 182
- McCarthy, D. (1953). Some possible explanations of sex differences in language development and disorders. *J. Psychol.*, 35:155-60. 196, 529
- McClelland, F. M., and Ratliff, J. A. (1947). The use of sociometry as an aid in promoting social adjustment in a ninth-grade homeroom. *Sociometry*, 10:147-53. 405
- McCord, J., McCord, W., and Thurber, E. (1963). Effects of maternal employment on lower-class boys. *J. abnorm. soc. Psychol.*, 67:177-82. 101
- McCuen, J. T., *see* Shaw and McCuen.
- McDaniel, H. B. (1956). *Guidance in the modern school*. New York: Dryden. (608)
- McGehee, F. (1952). *Please excuse Johnny*. New York: Macmillan. 121
- McGinnies, E., *see* Mitnick and McGinnies.
- McLaughlin, K. F., ed. (1960). *Understanding testing: purposes and interpretations for pupil development*. (Pamphlet OE-25003) Washington: U. S. Office of Education. (464)
- McLaughlin, K. F. (1964). *Interpretation of test results*. Washington: U. S. Office of Education. (464)
- McQuary, J. P. (1953). Some relationships between nonintellectual characteristics and academic achievement. *J. educ. Psychol.*, 44:215-28. 235
- Mead, M. (1949). *Male and female*. New York: Morrow. (210)
- Meadow, A., *see* Parnes and Meadow.
- Meier, G. W. (1961). Infantile handling and development in Siamese kittens. *J. comp. physiol. Psychol.*, 54:284-86. 39
- Mensh, I. N., Kantor, M. B., Domke, H. R., Gildea, M. C.-L., and Glidwell, J. C. (1959). Children's behavior symptoms and their relationship to school adjustment, sex, and social class. *J. soc. Issues*, 15(1):8-15. 178-179, 194, 196
- Mersand, J., *see* Jewett et al.
- Metfessel, N. S., and Foster, J. T. (1965). *Twenty-one research findings re culturally disadvantaged youth supported by information obtained from preschool critical incident observation records*. Unpublished paper. 547-549
- Meyers, S., *see* Haselrud and Meyers.
- Mialaret, G. (1956). Le rendement d'une leçon à l'école primaire. *Cahiers de pédagogie d'orientation professionnelle*, 1:12-25. 334
- Millard, C. V., and Rothney, J. W. M. (1957). *The elementary school child: a book of cases*. New York: Dryden. (608)
- Miller, C. H. (1961). *Foundations of guidance*. New York: Harper. (608)
- Miller, G. A., *see* Heise and Miller
- Miller, H. R. (1951). What if they don't know grammar? *English J.*, 40:525-26. 225-226
- Miller, J. O., *see* Gray et al.
- Miller, K. M., and Biggs, J. B. (1958). Attitude change through undirected group discussion. *J. educ. Psychol.*, 49:224-28. 396

References and Author Index

- Mintz, A. (1951). Non-adaptive group behavior. *J. abnorm. soc. Psychol.*, 46:150-59. 158-159
- Mischel, W. (1958). Preference for delayed reinforcement: an experimental study of a cultural observation. *J. abnorm. soc. Psychol.*, 56:57-61. 100
- Mitchell, L. S. (1953). *Two lives: the story of Wesley Clair Mitchell and myself*. New York: Simon and Schuster. (645)
- Mitnick, L. L., and McGinnies, E. (1958). Influencing ethnocentrism in small discussion groups through film communication. *J. abnorm. soc. Psychol.*, 56:82-90. 402
- Mitsos, S. B., see Hoffman et al.
- Monachesi, E. D., see Hathaway and Monachesi.
- Mooney, R. L., and Gordon, L. V. (1950). *Mooney Problem Checklists*. New York: Psychological Corp. 487
- Morehead, C. G., see Turney and Morehead.
- Morgan, D. H. (1944). Emotional adjustment of visually handicapped adolescents. *J. educ. Psychol.*, 35:65-81. 511
- Morgan, P. K., and Gaier, E. L. (1956). The direction of aggression in the mother-child punishment situation. *Child Developmt.*, 27:447-57. 488-489
- Morris, G., see Strang and Morris.
- Morse, W. C. (1961). *A study of school classroom behavior from diverse evaluative frameworks: developmental, mental health, substantive learning, and group process*. Cooperative Research Project No. 753. Ann Arbor: School of Education, Univ. of Michigan. 415
- Morse, W. C. (1962). Perceptions of classroom mental health, group process, and learning from diverse points of view. *Percept. mot. Skills*, 14:390. 415
- Morse, W. C. (1963). Working paper: training teachers in life space interviewing. *Amer. J. Orthopsychiat.*, 33:727-30. 603-604
- Morse, W. C., see also Dunn et al.
- Mortensen, D. G., and Schmuller, A. M. (1959). *Guidance in today's schools*. New York: Wiley. (608)
- Mosely, N., see Cutts and Mosely.
- Moser, H. E. (1947). *Concept of arithmetic readiness: an investigation on the second-grade level*. Unpublished thesis, Duke Univ. 272
- Moser, W. E., see Froehlich and Moser.
- Mosher, D. L., and Scodel, A. (1960). Relationships between ethnocentrism in children and ethnocentrism and authoritarian rearing practices of their mothers. *Child Developmt.*, 31: 369-76. 161
- Moulton, R. W. (1965). Effects of success and failure on level of aspiration as related to achievement motives. *J. pers. soc. Psychol.*, 1:399-406. 304
- Mouly, G. J. (1960). *Psychology for effective teaching*. New York: Holt, Rinehart, and Winston. (345)
- Moustakas, C. E. (1956). *The teacher and the child: personal interaction in the classroom*. New York: McGraw-Hill. (421), 599-600
- Mullen, F. A. (1950). Truancy and classroom disorder as symptoms of personality problems. *J. educ. Psychol.*, 41:97-109. 195
- Murphy, L. B. (1956). *Personality in young children. Vol. 1. Methods for the study of personality in young children*. New York: Basic Books. 181
- Murray, H. A. (1938). *Explorations in personality*. Cambridge: Harvard Univ. Press. 32
- Murray, H. A., see also Kluckhohn and Murray.
- Mussen, P., ed. (1960). *Handbook of research methods in child development*. New York: Wiley. (90)
- Mussen, P., see Jones and Mussen.
- Muuss, R. E. (1960). The relationship between "causal" orientation, anxiety, and insecurity in elementary school children. *J. educ. Psychol.*, 51:122-29. 409

References and Author Index

- Myers, K. E., Travers, R. M. W., and Sanford, M. E. (1965). Learning and reinforcement in student pairs. *J. educ. Psychol.*, 56:67-72. 392
- National Education Assn. (1918). *Cardinal principles of education*. Washintgon: Bureau of Education. 70-71
- National Education Assn. (1957). The status of the American public-school teacher. *National Education Assn. Res. Bull.*, 35: No. 1. 613, 616, 618
- National Education Assn. (1963). Extra pay for extra duties, 1962-63. *Research Memo* 8. 616
- National Education Assn. (1964). Ranking the states, 1963-64. *NEA Research Bull.*, 41:14-17. 456
- National Manpower Council (1957). *Womanpower*. New York: Columbia Univ. Press. 101
- National Opinion Research Center (1947). Jobs and occupations: a popular evaluation. *Opinion News*, 9(4):3-13. 641-642
- Neill, A. S. (1960). *A radical approach to child rearing*. New York: Hart. 277
- Nelson, V. L., see Sontag et al.
- Neugarten, B. L. (1946). Social class and friendship among school children. *Amer. J. Sociol.*, 51:305-13. 118
- Neugarten, B. L., see also Havighurst and Neugarten.
- Newcomb, T. M. (1958). Attitude development as a function of reference groups: the Bennington study. In E. E. Maccoby et al., eds, *Readings in social psychology*, 3rd ed. New York: Holt. 296
- Newell, C. A. (1944). Class size and adaptability. *Teachers College Record*, 45:556-57. 18
- Newman, E. B. (1939). Forgetting of meaningful material during sleep and waking. *Amer. J. Psychol.*, 52:65-71. 301
- Nichtern, S., see Donahue and Nichtern.
- Niemeyer, J. H. (1959). Splitting the social atom. *Saturday Review*, 42(37):18-19, 23 (September 12, 1959). 618
- Northway, M. L. (1944). A study of the personality pattern of children least acceptable to their age mates. *Sociometry*, 7:10-25. 147
- Norton, A. E., see Kounin et al.
- Norton, V., see Lovos and Norton.
- Nye, F. I. (1958). *Family relationships and delinquent behavior*. New York: Wiley. 101
- Nye, I. (1951). Adolescent-parent adjustment—socio-economic level as a variable. *Amer. sociol. Rev.*, 16:341-49. 101
- Nye, I. (1952). Adolescent-parent adjustment: age, sex, sibling number, broken homes, and employed mothers as variables. *J. Marriage fam. Liv.*, 14:327-31. 101
- Oberholtzer, K. E., see Schramm and Oberholtzer.
- Oden, M. H., see Terman and Oden.
- Ofchus, L. T., and Gnagey, W. J. (1963). Factors related to the shift of professional attitudes of students in teacher education. *J. educ. Psychol.*, 54:149-53. 626
- Ojemann, R. H. (1950). An integrated plan for education in human relations and mental health. *J. of School Health*, 20:99-106. 407
- Ojemann, R. H., Levitt, E. E., Lyle, W. H., Jr., and Whiteside, M. F. (1955). The effects of a "causal" teacher-training program and certain curricular changes on grade school children. *J. exper. Educ.*, 24:95-114. 409
- Olden, C. (1952). Notes on child rearing in America. In *Psychoanalytic study of the child*, vol. 7. New York: International Universities Press. 109
- Oliver, W. A. (1950). *A study of the lag between teachers' educational beliefs and their classroom practices*. Unpublished doctoral dissertation, Washington State College. 380
- Olsen, J. (1965). Challenge of the poor to the schools. *Phi Delta Kappan*, 47:79-84. 552-553

References and Author Index

- Olson, A. L., *see* Clarke and Olson.
- Olson, W. C. (1949). *Child development*. Boston: Heath. 82
- O'Malley, E. E., *see* Bullis and O'Malley.
- O'Neill, R. C. (1959). Predicting success with the ITED. *Calif. J. educ. Res.*, 10:86-91. 451
- Opel, W., *see* Wiener et al.
- Osborn, A. F. (1957). *Applied imagination*, rev. ed. New York: Scribner. 399
- Page, E. B. (1958). Teacher comments and student performance: a seventy-four classroom experiment in school motivation. *J. educ. Psychol.*, 49:173-81. 256, 282-283, 432
- Paivio, A. (1964). Childrearing antecedents of audience sensitivity. *Child Developmt.*, 35:397-416. 187-188
- Palermo, D. S., *see* McCandless et al.
- Parnes, S. J., and Meadow, A. (1960). Evaluation of persistence of effects produced by a problem-solving course. *Psychol. Rep.*, 7:357-61. 495
- Parten, M. L. (1932). Social participation among preschool children. *J. abnorm. soc. Psychol.*, 27:243-69. 131-132, 189
- Pasamanick, B., *see* Retting and Pasamanick, and Jacobson et al.
- Paterson, J., *see* Denny et al.
- Patterson, G. R., and Anderson, D. (1964). Peers as social reinforcers. *Child Developmt.*, 35:951-60. 137-138
- Patton, G. M., *see* Lindgren and Patton.
- Pauley, F. R. (1951). Sex differences and legal school entrance age. *J. educ. Psychol.*, 45:1-9. 196
- Pearson, G. H. J. (1952). A survey of learning difficulties in children. In *Psychoanalytic study of the child*, vol. 7. New York: International Universities Press. 105, 151-152, 220
- Peck, R. F. (1958). Family patterns correlated with adolescent personality structure. *J. abnorm. soc. Psychol.*, 57:347-50. 104
- Peck, R. F., *see* Veldman and Peck.
- Perkins, H. V. (1965). Classroom behavior and underachievement. *Amer. educ. Res. J.*, 2:1-12. 478
- Peters, H. J., *see* Farwell and Peters.
- Petrinovich, L., *see* Lindgren et al.
- Pfieger, E. F. (1947). Pupil adjustment problems and a study of relationships between scores on the California Test of Personality and the Mooney Problems Checklist. *J. educ. Res.*, 41:265-78. 196
- Phenix, P. H., ed. (1961). *Philosophies of education*. New York: Wiley. (242)
- Phillips, B. N. (1962). Sex, social class, and anxiety as sources of variation in school achievement. *J. educ. Psychol.*, 53:316-22. 556-558
- Phillips, B. N., Duke, R. L., and DeVault, M. V., eds. (1960). *Psychology at work in the elementary classroom*. New York: Harper. (314)
- Phillips, D. N., Wiener, D. N., and Haring, N. G. (1960). *Discipline, achievement, and mental health*. Englewood Cliffs, N.J.: Prentice-Hall. (376), 508
- Piaget, J., and Inhelder, B. (1958). *The growth of logical thinking from childhood to adolescence*. New York: Basic Books. 67-68
- Pickrel, E. W. (1958). The differential effect of manifest anxiety on test performance. *J. educ. Psychol.*, 49:43-46. 308
- Pierovich, A., *see* Stroup and Pierovich.
- Pinneau, S. R., and Jones, H. E. (1959). A longitudinal study of the consistency of behavior between three and ten years. *Calif. J. educ. Res.*, 10:119-20. (Abstract) 82
- Popham, W. J., and Greenburg, S. W. (1958). Teacher education: a decade of criticism. *Phi Delta Kappan*, 40:118-20. 637
- Porter, F., *see* Buchmueller et al.

References and Author Index

- Pratt, C. (1948). *I learn from children*. New York: Simon and Schuster. (421)
- Prescott, D. A. (1938). *Emotion and the educative process*. Washington: American Council on Education. (314)
- Pressey, S. L. (1926). A simple device for teaching, testing, and research in learning. *School and Society*, 23:373-76. 256
- Pressey, S. L. (1946). Age of college graduation and success in adult life. *J. appl. Psychol.*, 30:226-33. 518
- Protz, R. E., *see* Hoffman et al.
- Provence, S., and Lipton, R. C. (1962). *Infants in institutions*. New York: International Universities Press. 474
- Quay, H. C., and Quay, L. C. (1965). Behavior problems in early adolescence. *Child Developmt.*, 36:215-20. 176-177
- Quillen, I. J., and Hanna, L. A. (1948). *Education for social competence*. Chicago: Scott Foresman. 431-432
- Rasey, M. I., *see* Kelley and Rasey.
- Ratliff, J. A., *see* McClelland and Ratliff.
- Redefer, F. L. (1950). The Eight Year Study . . . after eight years. *Progressive Educ.*, 28(2): 33-36. 415
- Redl, F., and Wattenberg, W. W. (1959). *Mental hygiene in teaching*, rev. ed. Boston: Houghton Mifflin. (210), (376), 614, (645)
- Redl, F., *see also* Sheviakov and Redl.
- Reed, M. F., *see* Anderson et al.
- Reid, I. E., *see* Wallen et al.
- Remmers, H. H. (1962). Cross-cultural studies of teenagers' problems. *J. educ. Psychol.*, 53:254-61. 140
- Remmers, H. H., and Shimberg, B. (1949). Problems of high school youth. *Purdue Opinion Poll for Young People*, 8(3):April. 197-198
- Remmers, H. H., *see also* Horton and Remmers.
- Renison, N., *see* Amen and Renison.
- Rettig, S., and Pasamanick, B. (1959). Status and job satisfaction of public school teachers. *School and Society*, 87:113-16. 14, 636
- Rettig, S., *see also* Jacobson et al.
- Reyburn, H. (1951). Guidance needs of students from broken homes. *Calif. J. educ. Res.*, 2:22-25. 99
- Rice, J. M. (1897). The futility of the spelling grind. *Forum*, 23:163-72, 409-19. 234, 239
- Richy, H. G., *see* Henry and Richy.
- Rider, R. V., *see* Wiener et al.
- Riesman, D., Jacob, P. E., and Sanford, N. (1959). *Spotlight on the college student*. Washington: American Council on Education. 323
- Riessman, F. (1962). *The culturally deprived child*. New York: Harper. 545, (575)
- Riley, M. W., and Riley, J. W., Jr. (1951). A sociological approach to communications research. *Public Opinion Quart.*, 15:445-60. 136-137
- Ripple, R. E., ed. (1964). *Readings in learning and human abilities*. New York: Harper and Row. (24), (421), (464)
- Rivlin, H. N. (1958). Classroom discipline and learning. In M. Krugman, ed., *Orthopsychiatry and the school*. New York: American Orthopsychiatric Assn. (376)
- Rocchio, P. D., and Kearney, N. C. (1956). Teacher-pupil attitudes as related to nonpromotion of secondary school pupils. *Educ. psychol. Measmt.*, 16:244-52. 515
- Rodriquez, A., Rodriquez, M., and Eisenberg, L. (1959). The outcome of school phobia: a follow-up study based on 41 cases. *Amer. J. Psychiat.*, 116:540-44. 194

References and Author Index

- Roe, K. V., Case, H. W., and Roe, A. (1962). Scrambled versus ordered sequence in autoinstructional programs. *J. educ. Psychol.*, 53:101-104. 259
- Roff, M., and Sells, S. B. (1965). Relations between intelligence and sociometric status in groups differing in sex and socio-economic background. *Psychol. Rep.*, 16:511-16. 147-148
- Rogers, C. (1951). *Client-centered therapy*. Boston: Houghton Mifflin. 42, (55)
- Rogers, C. R. (1961a). Two divergent trends. In R. May, ed., *Existential psychology*. N.Y.: Random House. (277)
- Rogers, C. R. (1961b). *On becoming a person*. Boston: Houghton Mifflin. 324
- Rosenfeld, H., and Zander, A. (1961). The influence of teachers on aspirations of students. *J. educ. Psychol.*, 52:1-11. 319
- Rosenfield, L., see Karelitz et al.
- Rosenthal, S. (1952). A fifth grade classroom experiment in fostering mental health. *J. child Psychiat.*, 2:302-29. 407-409
- Rosenzweig, L. E., and Long, J. (1960). *Understanding and teaching the dependent retarded child*. Darien, Conn.: Educational Publishing Corp. (540)
- Rosenzweig, M. R., see Bennett et al.
- Roth, R. H. (1963). Student reactions to programmed learning. *Phi Delta Kappan*, 44:278-81. 259
- Rothney, J. W. M., see Millard and Rothney.
- Rowley, V. N., see Stone and Rowley.
- Ruebush, B. K., see Sarason et al.
- Ruesch, J. (1953). Social techniques, social status, and social change in illness. In C. Kluckhohn and H. A. Murray, eds., *Personality in nature, society, and culture*, 2nd ed. New York: Knopf. 40
- Runkel, P. J., see Gage et al.
- Russell, D. H. (1956). *Children's thinking*. Boston: Ginn. (90), (314)
- Russell, D. H., and Fea, H. R. (1963). Research on teaching reading. In N. L. Gage, ed., *Handbook of research on teaching*. Chicago: Rand McNally. 299
- Ryans, D. G. (1955). Educational psychology. In C. P. Stone and Q. McNemar, eds., *Annual review of psychology*, vol. 6. Stanford: Annual Reviews. (24)
- Ryans, D. G. (1960). *Characteristics of teachers: their description, comparison, and appraisal*. Washington: American Council on Education. (646)
- Sanford, M. E., see Myers et al.
- Sanford, N., see Riesman et al.
- Sarason, S. B. (1959). *Psychological problems in mental deficiency*, 3rd ed. New York: Harper. (540)
- Sarason, S. B., Davidson, K., and Blatt, B. (1962). *The preparation of teachers: an unstudied problem in education*. New York: Wiley. (646)
- Sarason, S. B., Davidson, K., Lighthall, F. F., Waite, R. R., and Ruebush, B. K. (1960). *Anxiety in elementary school children: a report of research*. New York: Wiley. (210), 308, (314)
- Sarason, S. B., see also Mandler and Sarason.
- Sargent, S. S., and Williamson, R. C. (1958). *Social psychology*, 2nd ed. New York: Ronald. (166)
- Sassenrath, J. M., and Garverick, C. M. (1965). Effects of differential feedback from examinations on retention and transfer. *J. educ. Psychol.*, 56:259-63. 433
- Saxe, R. W., see Beck and Saxe.
- Schantz, B. M. B. (1963). *An experimental study comparing the effects of verbal recall by children in direct and indirect teaching methods as a tool of measurement*. Unpublished doctoral dissertation, Pennsylvania State Univ. 332
- Schiff, H. M., see Ausubel et al.

- Schlesser, G. E., *see* Finger and Schlesser.
- Schmuller, A. M., *see* Mortensen and Schmuller, and Thorpe and Schmuller.
- Schramm, W., and Oberholtzer, K. E. (1964). (No title) *Phi Delta Kappan*, 46:133. 388-389
- Schreiber, D. (1962). *Finding and developing talent*. Unpublished address delivered at the Univ. of San Francisco, March 13, 1962. 570-571
- Schreiber, D. (1963). The dropout and the delinquent: promising practices gleaned from a year of study. *Phi Delta Kappan*, 44:215-21. 570-571, 594
- Schunert, J. (1951). The association of mathematical achievement with certain factors resident in the teacher, in the pupil, and in the school. *J. exper. Educ.*, 19:219-38. 328
- Schwartz, B. (1959). An investigation of the effects of a seventh and eighth grade core program. *J. educ. Res.*, 53:149-52. 387
- Scodel, A., *see* Mosher and Scodel.
- Scott, W. A. (1957). Attitude change through reward of verbal behavior. *J. abnorm. soc. Psychol.*, 55:72-75. 396
- Seagoe, M. V. (1936). Qualitative wholes: classroom experiments. *J. educ. Psychol.*, 27:612-20. 301
- Sears, P. S. (1940). Levels of aspiration in academically successful and unsuccessful children. *J. abnorm. soc. Psychol.*, 35:498-536. 304
- Sears, R. R., Maccoby, E. E., and Levin, H. (1957). *Patterns of child rearing*. Evanston, Ill.: Row, Peterson. (126)
- Seechrest, L. (1963). Implicit reinforcement of responses. *J. educ. Psychol.*, 54:197-201. 160
- Seidman, J. M., ed. (1963). *Educating for mental health*. New York: Crowell. (167), (210), (540)
- Seitz, T. L. (1964). *The relationship between creativity and intelligence, personality, and value patterns in adolescence*. Unpublished doctoral dissertation, Univ. of Denver. 494
- Sells, S. B., *see* Roff and Sells.
- Semler, I. J. (1960). Relationships among several measures of pupil adjustment. *J. educ. Psychol.*, 51:60-64. 199
- Semler, I. J., and Iscoe, I. (1963). Comparative and developmental study of the learning abilities of Negro and white children under four conditions. *J. educ. Psychol.*, 54:38-44. 559
- Seward, J. P. (1954). Learning theory and identification: II. The role of punishment. *J. genet. Psychol.*, 84:201-10. 358
- Shaw, M. C. (1964). Note on parent attitudes toward independence training and the academic achievement of their children. *J. educ. Psychol.*, 55:371-74. 479-481
- Shaw, M. C., and Brown, D. J. (1957). Scholastic underachievement of bright college students. *Personnel Guid. J.*, 36:195-99. 478
- Shaw, M. C., and Grubb, J. (1958). Hostility and able high school underachievers. *J. counsel. Psychol.*, 5:263-66. 478
- Shaw, M. C., and McCuen, J. T. (1960). The onset of academic under-achievement in bright children. *J. educ. Psychol.*, 51:103-8. 478-482
- Sherif, M. (1958). Group influences upon the formation of norms and attitudes. In E. E. Maccoby et al., eds. *Readings in social psychology*, 3rd ed. New York: Holt. 296
- Sheviakov, G., and Redl, F. (1944). *Discipline for today's children and youth*. Washington: National Education Assn. (376)
- Shimberg, B., *see* Remmers and Shimberg.
- Siegel, A. E., and Haas, M. B. (1963). The working mother: a review of the research. *Child Developmt.*, 34:513-42. 101
- Siegel, L., and Siegel, L. C. (1965). Educational set: a determinant of acquisition. *J. educ. Psychol.*, 56:1-12. 300
- Singer, E., *see* Lindgren and Singer.

References and Author Index

- Skinner, B. F. (1948). *Walden II*. New York: Macmillan. 277
- Skinner, B. F. (1953). *Science and human behavior*. New York: Macmillan. 255
- Skinner, B. F. (1958). Teaching machines. *Science*, 128:969-77. 257-258
- Slobetz, F. (1950). How elementary teachers meet selected school situations. *St. Cloud Teachers College Bulletin*, 7:4-19. 357
- Slotkin, H. (1963). New program for dropouts. *Voc. Guid. Quart.*, 12:127-32. 594
- Smallenburg, H., see Mahler and Smallenburg.
- Smith, E. R., et al. (1942). *Appraising and recording student progress*. New York: Harper. (464)
- Smith, H. L., and Hightower, N. C. (1948). Incidence of functional disease (neurosis) among patients of various occupations. *Occup. Med.*, 5:182-85. 633
- Smith, W. D., and Lebo, D. (1956). Some changing aspects of the self-concept in pubescent males. *J. genet. Psychol.*, 88:61-75. 80
- Smitter, F., see Clancy and Smitter.
- Snow, R. H. (1963). Anxieties and discontents in teaching. *Phi Delta Kappan*, 44:318-21. 372
- Snygg, D. (1954). Learning: an aspect of personality development. In D. K. Adams, et al., eds., *Learning theory, personality theory, and clinical research: the Kentucky Symposium*. New York: Wiley. 286
- Snygg, D., and Combs, A. W. (1949). *Individual behavior*. New York: Harper. 268-269, 273, 292
- Snygg, D., see also Combs and Snygg.
- Social Studies Core Committee, South Bend (Ind.) Public Schools (1948). The "new look" in education. *The Staff*, 4(2):5,8. 381-383
- Solomon, M. D. (1951). *The personality factor of rigidity as an element in the teaching of the scientific method*. Unpublished doctoral dissertation, Michigan State College. 162
- Sontag, L. W., Baker, C. T., and Nelson, V. L. (1958). *Mental growth and personality development: a longitudinal study*. Monographs of the Society for Research in Child Development, 23: No. 68. 473
- Spaulding, R. L. (1963). What teacher attributes bring out the best in gifted children? *Gifted Children Quart.*, 7:150-56. 495
- Spector, S. I. (1953). Climate and social acceptability. *J. educ. Sociol.*, 27:108-14. 407
- Spence, J. T., and Maher, B. (1962). Handling and noxious stimulation of the albino rat: II. Effects on subsequent performance in a learning situation. *J. comp. physiol. Psychol.*, 55: 252-55. 39
- Spiegelberger, C. D. (1962). The effects of manifest anxiety on the academic achievement of college students. *Ment. Hyg.*, 46:420-26. 308-309
- Spitz, R. A. (1945). Hospitalism. An inquiry into the genesis of psychiatric conditions in early childhood. *Psychoanalytic study of the child*, vol. 1. New York: International Universities Press. 31
- Spitzer, H. F. (1954). Class size and pupil achievement in elementary schools. *El. School J.*, 55:82-86. 18
- Sprinthall, N. A., and Tiedeman, D. V. (1966). Guidance and the pupil. In J. I. Goodlad, ed., *The changing American school*, 65th yearbook of the National Society for the Study of Education, Part II. Chicago: Univ. of Chicago Press. (608)
- SPSSI Council (1960). Statement dated January 31, 1960, on the New York City Youth Board's report: "An experiment in predicting juvenile delinquency." *Newsletter of the Society for the Psychological Study of Social Issues*. 531
- Staats, A. W., and Staats, C. K. (1963). *Complex human behavior: a systematic extension of learning principles*. New York: Holt, Rinehart, and Winston. (55)
- Stanley, J. C. (1964). *Measurement in today's schools*, 4th ed. Englewood Cliffs, N.J.: Prentice-Hall. (464)
- Starch, D. (1927). *Educational psychology*, rev. ed. New York: Macmillan. 437
- Steeves, F. L., ed. (1964). *Readings in the methods of education*. New York: Odyssey. (345)

- Steininger, M., Johnson, R. E., and Kirts, D. K. (1964). Cheating on college examinations as a function of situationally aroused anxiety and hostility. *J. educ. Psychol.*, 55:317-24. 202
- Stendler, C. B. (1949). *Children of Brastown*. Urbana: Univ. of Illinois Press. 163
- Stendler, C. B. (1951). Social class differences in parental attitudes toward school at Grade I level. *Child Developmt.*, 22:37-45. 122
- Stendler, C. B., and Young, N. (1950). The impact of beginning the first grade upon socialization as reported by mothers. *Child Developmt.*, 21:241-60. 367
- Stern, G. G., and Masling, J. M. (1958). *Unconscious factors in career motivation for teaching*. (SAE 6459) Washington: Office of Education. 639
- Stevenson, H. W., Keen, R., and Knights, R. M. (1963). Parents and strangers as reinforcing agents for children's performance. *J. abnorm. soc. Psychol.*, 67:183-86. 624-625
- Stiles, L. J. (1950). Methods of teaching. In W. S. Monroe, ed., *Encyclopedia of educational research*, rev. ed. New York: Macmillan. 416
- Stogdill, R. M., and Coons, A. E. (1957). *Leader behavior: its description and measurement*. Research Monograph No. 88. Columbus: Bureau of Business Research, Ohio State Univ. 354
- Stone, C. H. (1948). Are vocational orientation courses worth their salt? *Educ. psychol. Measmt.*, 8:161-82. 590
- Stone, F. B., and Rowley, V. N. (1964). Educational disability in emotionally disturbed children. *Except. Children*, 30:423-26. 534
- Stoops, E., and Wahlquist, G. W. (1958). *Principles and practices in guidance*. New York: McGraw-Hill. (608)
- Stouffer, G. A. W., Jr. (1952). Behavior problems of children as viewed by teachers and mental hygienists. *Ment. Hyg.*, 36:271-85. 173, 223
- Stouffer, G. A. W., Jr. (1959). The attitudes of parents toward certain behavior problems of children. *Research for the teaching profession*, December, 1959. Indiana, Pa.: State Teachers College. 173-174
- Stovall, T. F. (1958). Lecture vs. discussion. *Phi Delta Kappan*, 39:255-58. 331
- Strang, R. (1937). *Behavior and background of students in college and secondary school*. New York: Harper. 328
- Strang, R. (1954). Characteristics of a classroom which promotes mental health. *Nervous Child*, 10:363-67. 9
- Strang, R., and Morris, G. (1964). *Guidance in the classroom*. New York: Macmillan. (608)
- Stringer, L. A. (1959). Academic progress as an index of mental health. *J. soc. Issues*, 15(1):16-29. 173-175
- Strong, E. K., Jr. (1943). *Vocational interests of men and women*. Stanford: Stanford Univ. Press. 622
- Stroud, J. B. (1946). *Psychology in education*. New York: Longmans, Green. 307
- Stroup, D., and Pierovich, A. (1960). Five years out. *Calif. Monthly*, 71(11):6-7, 43, November. 638
- Suellwold, F. (1959). Empirische Untersuchungen über die Sorgen und Probleme von Jugendlichen in Deutschland und den USA. *Psychol. Rundschau*, 10:49-66. 140
- Sullivan, H. S. (1947). *Conceptions of modern psychiatry*. Washington: William Alanson White Psychiatric Foundation. 37, 96
- Superintendent of Public Instruction, State of California (1965). *Results of the California State Testing Program for 1964-65*. Unpublished memorandum to the California State Board of Education, dated October 12, 1965. 456
- Suppes, P. (1964). Modern learning theory and the elementary school curriculum. *Amer. educ. Res. J.*, 1:79-93. 504-505
- Symonds, P. M. (1950). Reflections on observations of teachers. *J. educ. Res.*, 43:688-96. 627
- Symonds, P. M. (1955). What education has to learn from psychology. II. Reward. *Teachers College Record*, 57:15-25. 293

References and Author Index

- Symonds, P. M. (1956). What education has to learn from psychology. III. Punishment. *Teachers College Record*, 57:449-62. 359
- Symonds, P. M. (1957). What education has to learn from psychology. IV. Whole versus part learning. *Teachers College Record*, 58:329-39. 301
- Taba, H. (1951). *Generalizing, summarizing, and developing group methods*. Unpublished paper, Conference on Group Processes, San Francisco State College, June. 405
- Taba, H. (1955a). In G. D. Spindler, ed., *Educational anthropology*. Stanford: Stanford Univ. Press. 141, 154
- Taba, H. (1955b). *With perspective on human relations*. Washington: American Council on Education. (421)
- Taba, H., et al. (1950). *Elementary curriculum in intergroup relations*. Washington: American Council on Education. 405-407
- Tasch, R. J., see Jersild and Tasch.
- Tenenbaum, S. (1963). The teacher, the middle class, the lower class. *Phi Delta Kappan*, 45: 82-86. 546-547
- Terman, L. M., and Oden, M. H. (1947). *Genetic studies of genius. IV. The gifted child grows up*. Stanford: Stanford Univ. Press. 414
- Terman, L. M., and Oden, M. H. (1959). *The gifted group at mid-life*. Stanford: Stanford Univ. Press. (540)
- Thayer, P. W., see Welsh et al.
- Thelen, H. A. (1954). *Dynamics of groups at work*. Chicago: Univ. of Chicago Press. (421)
- Thelen, H. A. (1960). *Education and the human quest*. New York: Harper. (55)
- Thistlethwaite, D. L. (1958). The conservation of intellectual talent. *Science*, 128:822-26. 594-595
- Thistlethwaite, D. L. (1959). Effects of social recognition upon the educational motivation of talented youth. *J. educ. Psychol.*, 50:111-16. 283
- Thomas, R. M. (1961). *Judging student progress*. New York: Longmans, Green. (464)
- Thompson, J. A. (1948). Children's fears in relation to school attendance. *Bull. Natl. Assn. School Social Workers*, 24:3-14. 193
- Thorndike, E. L. (1923). The gains made in ability by pupils who study Latin and by pupils who do not. *School and Society*, 18:690. 247
- Thorndike, E. L. (1924). Mental discipline in high school studies. *J. educ. Psychol.*, 15:1-22, 83-98. 234
- Thorndike, R. L., and Hagen, E. (1959). *Characteristics of men who remained in and left teaching*. Cooperative Research Proj. No. 574. (SAE 8189) Washington: U.S. Office of Education. 638
- Thorndike, R. L., and Hagen, E. (1961). *Measurement and evaluation in psychology and education*, rev. ed. New York: Wiley. 429, (464)
- Thorndike, R. L., et al. (1941). Observation of the behavior of children in activity and control schools. *J. exper. Educ.*, 10:138-45. 412
- Thorpe, L. P., Clark, W. W., and Tiegs, E. W. (1953). *California test of personality*. Monterey: Calif. Test Bureau. 487
- Thorpe, L. P., and Schmuller, A. M. (1954). *Contemporary theories of learning*. New York: Ronald. 265, (278)
- Thorpe, L. P., see also Lee and Thorpe, and Tiegs and Thorpe.
- Thurber, E., see McCord et al.
- Thurston, J. R., see Feldhusen and Thurston.
- Tiedeman, D. V., see Sprinthall and Tiedeman.
- Tiegs, E. W., and Thorpe, L. P. (1957). *California achievement tests, supplementary manual*. Monterey: Calif. Test Bureau. 452

- Tiegs, E. W., *see also* Thorpe et al.
- Torrance, E. P. (1963). *Creativity*. Washington: National Education Assn. (499)
- Torrance, E. P. (1964). Education and creativity. In C. W. Taylor, ed., *Creativity: progress and potential*. New York: McGraw-Hill. 495
- Torrance, E. P. (1965). *Mental health and achievement: increasing potential and decreasing dropout*. New York: Wiley. (210)
- Trager, H. G., and Yarrow, M. R. (1952). *They learn what they live*. New York: Harper. (167)
- Travers, R. M. W. (1963). *Essentials of learning*. New York: Macmillan. (278)
- Travers, R. M. W., *see also* Myers et al., and Wallen et al.
- Trost, M. A., *see* Cowen et al.
- Turney, A. H., and Morehead, C. G. (1954). An experimental evaluation of a small high school counseling program. *Univ. of Kansas Bull. of Educ.*, 8:74-77. 593
- Tyler, F. T. (1960). Sex differences. In C. W. Harris, ed., *Encyclopedia of educational research*, 3rd ed. New York: Macmillan. 196
- Tyler, R. W. (1948). Cooperation and conflict in the mental development of the child. *Ment. Hyg.*, 32:253-60. 238
- Ullman, C. A. (1952). *Identification of maladjusted school children*. Public Health Monogr. No. 7. Washington: Federal Security Agency. 178
- U.S. Dept. of Health, Education, and Welfare (1962). *The teacher and mental health*. Public Health Service Publication No. 385. Washington: Govt. Printing Office. (210)
- U.S. Office of Education (1964). The education of handicapped children. *School Life*, 46(6):10. 506-507
- Valin, E. (1961). *La valeur des examens: étude docimologique réalisée au Liban*. Études et documents d'éducation, No. 40. Paris: UNESCO. 437-438
- Van Dalen, D. B. (1962). *Understanding educational research*. New York: McGraw-Hill. (24), (464)
- van de Riet, H. (1964). Effects of praise and reproof on paired-associate learning in educationally retarded children. *J. educ. Psychol.*, 55:139-43. 220
- Vars, G. F. (1966). Can team teaching save the core curriculum? *Phi Delta Kappan*, 47:258-62. 387
- Veldman, D. T., and Peck, R. F. (1963). Student teacher characteristics from the pupil's point of view. *J. educ. Psychol.*, 54:346-55. 641
- Wahlquist, G. W., *see* Stoops and Wahlquist.
- Waite, R. R., *see* Sarason et al.
- Waldrop, M. F., and Bell, R. Q. (1964). Relation of preschool dependency behavior to family size and density. *Child Developmt.*, 35:1187-95. 192
- Walker, R. N., *see* Ames and Walker.
- Wallen, N. E., Travers, R. M. W., Reid, I. E., and Wodtke, K. H. (1963). Relationships between teacher needs and teacher behavior in the classroom. *J. educ. Psychol.*, 54:23-32. 325, 355-356
- Walters, C. E. (1965). Prediction of postnatal development from fetal activity. *Child Developmt.*, 36:801-8. 41
- Walters, R. H., *see* Bandura and Walters.
- Warner, W. L., Havighurst, R. J., and Loeb, M. B. (1944). *Who shall be educated? The challenge of unequal opportunities*. New York: Harper. (126)
- Warner, W. L., and Lunt, P. S. (1941). *Social life of a modern community*. New Haven: Yale Univ. Press. 111
- Warren, J. M., *see* Wilson et al.

References and Author Index

- Washburne, N. F. (1959). Socioeconomic status, urbanism, and academic performance in college. *J. educ. Res.*, 53:130-37. 122
- Waters, E., and Crandall, V. J. (1964). Social class and observed maternal behavior from 1940 to 1960. *Child Developmt.*, 35:1021-32. 115
- Watson, F. G. (1963). Research on teaching science. In N. L. Gage, ed., *Handbook of research on teaching*. Chicago: Rand McNally. 385
- Watson, G. (1957). Some personality differences in children related to strict or permissive parental discipline. *J. Psychol.*, 44:227-49. 103
- Watson, R. I. (1961). A brief history of educational psychology. *Psychol. Record*, 11:209-42. (24)
- Watson, R. I. (1965). *Psychology of the child*, 2nd ed. New York: Wiley. (90)
- Wattenberg, W. W., ed. (1966). *Social deviancy among youth*. 65th yearbook of the National Society for the Study of Education, Part I. Chicago: Univ. of Chicago Press. (540)
- Wattenberg, W. W., and Clifford, C. (1964). Relation of self-concepts to beginning achievement in reading. *Child Developmt.*, 35:461-67. 560
- Wattenberg, W. W., see Redl and Wattenberg.
- Weber, J. (1954). Child development implications for curriculum building. *Educational Leadership*, 11:343-46. 286
- Welsh, P., Antoinetti, J. A., and Thayer, P. W. (1965). An industrywide study of programmed instruction. *J. appl. Psychol.*, 49:61-73. 259
- Westby-Gibson, D. (1965). *Social perspectives on education*. New York: Wiley. (126), (167)
- Wetzel, N. C. (1942). Assessing physical conditions of children. *J. Pediatrics*, 22:82-86. 173
- White, R. K., and Lippitt, R. (1960). *Autocracy and democracy: an experimental inquiry*. New York: Harper. (126)
- White, R. K., see also Lewin et al.
- White, R. W. (1959). Motivation reconsidered: the concept of competence. *Psychol. Rev.*, 66: 297-333. 29
- Whiteside, M. F., see Ojemann et al.
- Whitney, A. P., see Gronlund and Whitney.
- Wickman, E. K. (1928). *Children's behavior and teachers' attitudes*. New York: Commonwealth Fund. 173
- Widdowson, E. M. (1951). Mental contentment and physical growth. *Lancet*, 260:1316-18. 86
- Wiener, D. N., see Phillips et al.
- Wiener, G., Rider, R. V., and Opel, W. (1963). Some correlates of IQ change in children. *Child Developmt.*, 34:61-67. 473
- Wilhelms, F. T. (1953). *Meeting inevitable feelings about competition*. Unpublished paper, delivered at Vallejo, Calif., April. 159
- Willis, M. (1961). *The guinea pigs after twenty years*. Columbus: Ohio State Univ. Press. 414, (421)
- Willits, F. K., see Bealer et al.
- Wilson, A. B. (1959). Consequences of the concentration of social classes within an urban area for the aspirations of high school boys. *Calif. J. educ. Res.*, 10:125 (Abstract). 151
- Wilson, C. C., ed. (1948). *Health education*. Washington: National Education Assn. 40
- Wilson, J. A. R. (1959). Some results of an enrichment program for gifted ninth graders. *J. educ. Res.*, 53:157-60. 518
- Wilson, M., Warren, J. M., and Abbott, L. (1966). Infantile stimulation, activity, and learning by cats. *Child Developmt.*, 36:843-53. 39
- Wilson, W. C. (1959). Value differences between public and private school graduates. *J. educ. Psychol.*, 50:213-17. 478
- Witherspoon, P. (1960). A comparison of the problems of certain Anglo- and Latin-American junior high school students. *J. educ. Res.*, 53:295-99. 110

- Witty, P. A. (1951). The teacher who has helped me the most. *Studies in higher education*, No. 76. Lafayette, Ind.: Div. of Educational Reference, Purdue Univ. 625-626
- Wodtke, K. H., *see* Wallen et al.
- Wolf, T. H. (1938). *The effect of praise and competition on the persisting behavior of kindergarten children*. Minneapolis: Univ. of Minnesota Press. 511
- Wolf, W., et al. (1965). How do children look at television? *Phi Delta Kappan*, 46:537-40. 476
- Wood, D. A. (1960). *Test construction: development and interpretation of achievement tests*. Columbus: Merrill. (464)
- Woodring, M. N. (1925). *The study of the quality of English in Latin translations*. New York: Bureau of Publications, Teachers College, Columbia Univ. 247
- Woolman, M. (1964). *Evaluations of the Progressive Choice Reading Method*. Washington: Institute of Educational Research. 571
- Worcester, D. A. (1956). *The education of children of above-average mentality*. Lincoln: Univ. of Nebraska Press. 519
- Wright, H. F. (1943). How the psychology of motivation is related to curriculum development. *J. educ. Psychol.*, 39:149-56. 30
- Wrightstone, J. W. (1938). *Appraisal of newer elementary school practices*. New York: Bureau of Publications, Teachers College, Columbia Univ. 393
- Yamamoto, K. (1964). Role of creative thinking and intelligence in high school achievement. *Psychol. Rep.*, 14:785-89. 494
- Yarrow, M. R., *see* Trager and Yarrow.
- Young, N., *see* Stendler and Young.
- Zabarenko, R. N., *see* Chambers and Zabarenko.
- Zander, A., *see* Rosenfeld et al.
- Zax, M., *see* Cowen et al.
- Zigler, E., and de Labry, J. (1962). Concept-switching in middle-class, lower-class, and retarded children. *J. abnorm. soc. Psychol.*, 65:267-73. 552
- Zigler, E., and Kanzer, P. (1962). The effectiveness of two classes of verbal reinforcers on the performance of middle- and lower-class children. *J. Pers.*, 30:157-63. 119-120, 552
- Zimmerman, I. L. (1965). Personal communication to the author. 569-570
- Zimmerman, I. L., and Allebrand, G. N. (1965). Personality characteristics and attitudes toward achievement of good and poor readers. *J. educ. Res.*, 59:28-30. 526-527
- Zweibelson, I., Bahnmuller, M. and Lyman, L. (1965). Team teaching and flexible grouping in the junior high-school studies. *J. exper. Educ.*, 34:20-32. 388

Subject Index

- Ability grouping, 520-524
- Able students, who do not attend college, 594-596
- Academic pressure, problem of, 596-600
- Accelerated Progressive Choice Reading Program (APCR), 571
- Acceleration, for gifted children, 517-520
- Achievement, need for (n Ach), 32-34, 138-40, 253, 304-305, 482, 553-554, 558, 559, 564-565
- Achievement, vs. "good behavior," 554
- "Activity" program, 393
- Adequacy, attainment of, 28-29
- Administrators, authoritarian attitudes of, 641
 - as guidance specialists, 584-585
 - and teacher attrition, 641
- Adolescence, relationships with others during, 139-142
 - rebelliousness during, 194-195
 - relationships with parents during, 140-141
 - relationships with peer group during, 141
- Adult standards for children's behavior, 320-321
- Affiliation, need for (n Aff), 32-34, 138-140, 182, 282, 304-305, 553-554
- After-school duties, 613, 616
- American attitudes toward children, 108-109
- American education, as compared with European, 230-231
- American schools, group life in, 134
- Amherst College, 518
- Amish, 111
- Anecdotal record, 489-490
- Anger, 35-36
- Animals, effects of handling during infancy, 39-40
- Anxiety, 557-558
 - defined, 35
 - effect on behavior, 35-37
 - and interpersonal relations, 37
 - and learning, 306-311
 - and loneliness, 129
 - normal, 38
 - origins of, 37-38
 - and problem behavior, 176-177
 - reduction by teachers, 366-368
- Aptitude tests, 482-483
- Arithmetic, teaching of, 384
- Army Alpha test, 470
- Artistic ability, 475
- Aspiration, level of, 304-306
- Attendance officers, 205
- Attention, need for, 31-32, 86
 - reward value of, 256, 283
- Audiovisual methods, 384-385, 401
- Authoritarianism, among administrators, 634-635
 - in families, 103-105
- Awareness, motives beyond, 47-50
- Behavior, purpose in, 50-52
 - multiple causation in, 51
- Behavioral science, defined, 3
- Belong, need to, 31, 150
- Bennett Mechanical Aptitude Test, 590
- Berkeley Growth Study, 103
- "Best pal" relationship, 135-137
- Binet, A., 467-468
- Birth order, 41, 475
- Books, number in home, 191
- Bowel-and-bladder training, 94
- Boys, and grade-getting, 195-196
 - and problem behavior, 195-199
 - problems of, 528-529
- Brain-damaged children, 513-514
- Brainstorming, 398-399

Subject Index

- Broken homes, effects of, 98-101
Buzz groups, 402
California, 455-456, 492, 641
California Achievement Tests, 455-456
California Psychological Inventory (CPI)
 scores, and school success, 298
California Tests of Personality, 487, 526
Canalboat children, 68, 556
Case conference, 601-603
Cattell Culture-Free Intelligence Test, 477
Cerebral cortex, 40
Cheating, 160, 201-202, 331
Children, status of, 108-109
Children's Manifest Anxiety Scale (CMAS),
 182, 308
Climate, emotional, 101-102, 156
 social, 264
Clinical research, 15-16
Cognitive development, 67-68
Cohesiveness, 153-154
Coladarsi, A., 19-20
Comic books, 247-248
Comics, 136-137
Committees, use of in instruction, 404
"Common sense," 217, 246
Communication, improvement in classroom,
 153, 339-341
 problems in 336-337
Community pressure on schools, 636
Competence, attainment of, 28-29, 250-251,
 286
Competition, 156-160
Compulsiveness, 189-190
Conditioning, classical, 253-254
 operant, 254-261
Conduct problems, defined, 175-176
Conflict, emotional, 190-192
Conformity, 186, 202-203, 222
Conscience, 369
Consideration, in leadership, 353-354
"Contract" plan of instruction, 390
Convergent thinking, 492-493
Cooperation, 158-160
Core curriculum, 386-388
Correlational coefficients, 20-21
Counseling, educational and vocational, 484-
 485
 effectiveness with dropouts, 593-594
Counselors, 581-582
Creativity, 492-496
 administrators' attitudes toward, 496
 Creativity, and intelligence, 492-494
 stimulating and facilitating, 494-496
 "Crisis" interviewing, 603-605
 Criticism, effect on learning, 220
 of schools, 636-637
 Culturally deprived, *see* Socially disadvantaged
 learners
 Curricular form, 386-387
Dalton Plan, 380
Daydreaming, 188
Defense mechanisms, 184-190
Delinquency, juvenile, 529-533
 vulnerability to, 532-533
Delinquents, teaching, 621
Democracy, in families, 103-105
Deprived, culturally, *see* Socially disadvantaged
 learners
Development, cognitive, *see* Cognitive develop-
 ment
Development, meaning of, 71
Developmental phases (Erikson), 78
Developmental tasks (Havighurst), 86-88
Dewey, J., 6, 265-267, 414
Differential Aptitude Test (DAT), 483
Disabilities, children with, 508-511
Disadvantaged, *see* Socially disadvantaged
 learners
Discipline, 349-373
 group-imposed, 361-362
 parental, 104
 self-imposed, 362-363
 task-imposed, 363-364
 teacher-imposed, 351-356
 teachers' anxieties about, 37-72
Discouragement, and handicapped children,
 509-511
Discussion method, 331
 advantages of, 335
Disturbed children, 98-99
Divergent thinking, 492-493
Dropout rate, reducing, 570
Dropouts, and guidance workers, 590-594
Early Training Project (ETP), at George
 Peabody College, 561-569
 changes in IQ reported, 569
 developing n Ach, 564
 planning of, 569-570
 results of, 568-569
 social reinforcement as a technique, 562-564
 teaching delay of gratification, 565-566

- Early Teaching Project (ETP), teaching persistence, 566-567
- Education, changing role of, 5-6
emergence as a major force, 5
laymen's ideas about, 14-15
- Educational methods, resistance to change in, 238-240
- Educational Policies Commission, 70
- Educational processes, defined, 4
- Educational psychology, as applied science, 20
changes in emphasis, 18
focal areas of, 6-10
role of, 4-5
- Educational Testing Service, 437, 439, 441
- Effectance, 29, 250-251
- Ego rewards, and middle-class children, 552
- Ego strength, of socially disadvantaged children, 560
- Eight-Year Study, 412-414
- Elementary teachers, attitudes of, 411
- Elm town, 114, 119, 121, 123
- Emerging nations, 5
- Emotional health, 71-206
- Emotional problems, 533-536
and counseling, 597-600
of learners, 588-589
- Emotional security, 101
- Emotionally handicapped students, 524-536
- Energy level, in infants, 96
- Engineering courses, personality factors related to success in, 295
- English, forgetting of, 226-227
grading compositions in, 437
personality factors related to success in, 295
- English schools, discipline in, 358
and "eleven-plus" examinations, 83
- "Enrichment," for gifted students, 517-519
- European schools, 337-338, 415, 460
- Evaluation, 425-460
attitudes toward, 433-435
feedback in, 432-433
function of educational goals in, 427-428
steps in, 427-428
teacher's role in, 425-427
use of tests and measurements in, 428-432
- Examinations, 329-331
- Exceptional children, 505-536
- Expectations, teachers' conflicts in, 631-633
- Experimental approaches to education, 381-382, 407-410
- Experimental psychology, 16
- Extracurricular activities, participation of teachers in, 615-616
- Extracurricular activities, and social class of students, 119
- Extrinsic incentives, for learning, 221-222
- Fads, 149
- Failure, effects of, 200
- Families, as contributors to learning, 93-94
effect on learners, 93-124
as interpreters and transmitters of culture, 106-107
marginal, 107
- Fantasy, 188
- Fathers, absence from home, 550
- Fear, 35-36
use of, 310
- Feedback, 267
in evaluation, 432-433
in teaching, 339
- Fels Research Institute, 473
- Finland, 109
- Firm, need to be, 621
- First-born children, 41
- Foreign-born parents, children of, 109-111
- Foreign-language instruction, 385-386
- Foreign languages, prediction of success in, 297
- Forgetting, 224-226
- Future-orientation, 100
- Geometry, 303
- George Peabody College, Early Training Program at, 561-569
school psychology program at, 582
- Germany, 86, 106-107, 109, 140
- Gesell Institute for Child Development, 67
- Gestalt psychology, 261-262
- Gifted children, problems of, 515-516
special programs for, 516-520
- Girls, and grade-getting, 195-196
and problem behavior, 195-199
- Goals, in evaluation, 427-428
- Goddard, H. H., 468
- Grades, school, *see* Marks
- Gratification, delay of, 565-566
- Gratifications, in teaching, 638-643
- Greek, 106
- Greenwich Royal Observatory, 467
- Group-centered methods, 395-410
- Group-discussion methods, 398-404, 495
- Growth and development, accelerated or retarded, 84-86
evidences of, 59-61

Subject Index

- Growth and development, individual patterns of, 81-83
- Growth cycle, 65
- Guidance services, 579-605
- Gypsy children, 69, 556

- Happiness of children, 101, 116
- Hartmann, G. W., 261
- Higher Horizons Project, 570
- "Holding power," of high schools, 456
- Homework, 327-329
 - helping socially deprived children with, 570-571
- Homogeneous grouping, *see* Ability grouping
- Honor system, 202
- Hopi, 106
- Hostility, displaced, 184-185
- Human relations in the classroom, 407

- Identification, 186
- Immaturity, emotional and social, 176-177
- Indian, American, 569-670
- Individual differences, adapting education to, 504-506
 - measurement of, 467
- Individualized education, 579-581, 585-586
- Infancy, anxiety in, 37
- Insight, 11-12, 262
- Institute of Child Welfare, Berkeley, 84
- Institute for Mathematical Studies in the Social Sciences, 504
- Institutionalized children, 84-86
- Instrumental learning, *see* Conditioning, operant
- Intelligence, and creativity, 492-494
 - different types of, 476
 - measurement of, 467-482
- Intelligence tests, group, 470
 - individual, 467-470
 - nonverbal, 477
 - social-class biases in, 477
 - and what they measure, 475-476
- Interest tests, 483-485
- Intergroup education, 163-164
- Interpersonal relations, and anxiety, 37
- Intrinsic incentives for learning, 221-222
- Iowa Tests of Educational Development (ITED), 451
- IQ, changes in, 568-569
 - deviation, 454
 - formula for, 468
 - IQ, relationship to school performance, 556-558
 - stability and change in, 471-475
 - verbal and nonverbal, 470

- Kent-Rosanoff Word Association Test, 75
- Kindergarten, effect on intelligence, 70
- Koffka, K., 261
- Köhler, W., 261
- Kuder Preference Record, 484, 590
- Kuhlmann, F., 468

- Language laboratories, 385-386
- Latin, as aid to English, 247
- Latin America, 109-110
- Learner, 6
 - and his family, 93-124
- Learner-centered methods, criticism of, 410-412
 - prospects for, 414-417
- Learning, as accumulating knowledge, 223-224
 - anxiety as a factor in, 306-311
 - of attitudes, 292-296
 - authoritarian approaches to, 224
 - automatic transfer of, 232-234
 - and "being told," 227-229
 - belief it should be painful, 234-235
 - belief it should be pleasant, 235-238
 - cognitive and affective factors in, 281-311
 - of concepts, 290-292
 - as deductive or inductive process, 229-232
 - defined, 39
 - empirical evidence of, 425
 - through failure, 237
 - implicit theories of, 215
 - incidental, 94-96, 282
 - instrumental, 293
 - perception in, 302
 - personality factors in, 297-299
 - prevalence of traditional beliefs about, 238-240
 - problems of management in classroom, 317-343
 - programmed, 256-260
 - readiness for, 299-300
 - as resulting from reward or punishment, 217-223
 - of skills and information, 289-290
 - social, 39, 251-253, 262-264
 - traditional approaches to, 320-331
 - traditional beliefs about, 213-240
 - transfer of, 301

- Learning process, 7-9, 213
 as continuous, 251
 direction and control of, 324-327
 guidance of, 325-326
 involvement of student in, 388-389
 perceptual aspects of, 251
 physiological aspects of, 252
 psychological conceptions of, 245-274
 resistance to, 323
 results of teacher domination, 333-334
 Learning situation, 9-10
 inelasticity in, 288-289
 Learning theories, assumptions underlying, 249-252
 as based on science, 246-267
 classical conditioning, 253-254
 cognitive, 265-268
 field theory, 263-264
 Gestalt, 261-263
 need to develop, 245-246
 operant conditioning, 254-261
 phenomenological, 268-274
 problem-solving type, 265-268
 requirements imposed by teachers on, 248-249
 testing of popular, 247-248
 Lebanon, 437, 474
 "Life-space" interviewing, 603-605
 Love, need for, 31-32, 86, 105
 Lower class, 113-116, 128
 attitudes in general, 287
 attitudes toward school, 121-122, 138
 behavior, 529-530
 children, 543-572
 and ego rewards, 552
 meeting school needs of, 120-124
 and problem behavior, 192-193
 Loyalties, teachers' conflicts in, 633-636
 Maintenance, as a need, 29-31
 Manipulation, of learning, 326
 Marks, school, 552
 Mass education, problems of, 288-289, 579
 Maturation, 59-88
 Maturation rates, variations in, 80
 Maturity, concept of, 61-62
 emotional, 75-79
 intellectual, 63-70
 kinds of, 62-63
 physical, 79-81
 social, 70-75
 Measurement psychology, 16-17
 Medical specialists in schools, 583-584
 Mental age, 468
 Mental discipline, 234-235
 Mental growth, individual differences in, 472
 Mental-growth rate, differences in, 554-556
 Mental health, and reading, 526-528
 and school problems, 201-206
 and speech problems, 525-528
 Mental Measurements Yearbook, 451
 Mental mechanisms, 184-190, 611
 learning of, 190
 Mentally retarded children, 511-515
 Mexicans, 121, 477
 Mexico, 109
 Middle childhood, social relations during, 134-139
 Middle class, 112-116, 118, 200-201
 attitudes, 138, 287
 children and ego rewards, 552
 values, 191-192
 Minnesota Teacher Attitude Inventory, 515
 Mobility, social, 305
 Mobilization for Youth, Homework Helper Program, 570
 Mooney Problem Checklists, 99, 487-488
 Morale, 154-156, 199-200
 of teachers, 416
 Mothers, employed, 101
 Motivation, 27-52, 252-253

 n Ach, *see* Achievement, need for
 n Aff, *see* Affiliation, need for
 National Education Association, 70
 National Merit Scholarship competition, 283, 594
 National Opinion Research Center, 641-642
 Need, for achievement, *see* Achievement, need for
 for affiliation, *see* affiliation, need for
 Needs, basic, 29-35
 defined, 30
 frustration of, 35
 normative, 30, 322
 psychological, 30, 322
 socialized, 34
 of students, how schools adjust to, 600-601
 system of, 34
 Negro children, experiences of, 558-559
 New York, 449, 570
 Newborn infants, conditioning of, 81
 Nonpromotion, 514-515
 Normal anxiety, 38, 307, 369-370

Subject Index

- Normal curve, 454
Normative needs, 30, 322
Norms, grade placement, 452-453
 maturational, 61
 social, 149-153, 296
Nursery school, children in, 73, 82
Nurturant behavior, effect of, 95

Occupational Interest Inventory, 484, 486
Oral examinations, 436
Orphans, 474

Parent-Teacher Association, 617-618
Parental absence, 100
Parents, adolescents' attitudes toward, 140-141
 and attitudes toward college attendance, 595
 conferences with, 458-459
 as teachers, 624-625
Pavlov, I. P., 254
Peace Corps, 622-623
Peer group, 31
Peer society, 130
Percentile scores, 453-454,
perceptions, change with maturity, 46-47
Perceptual factors in behavior, 42
Perceptual rigidity, 336
Permissiveness, and creativity, 494-495
 of parents, 103-105
Persistence, learning of, 566-567
Personal problems, and counseling, 597-598
 how teachers may help with, 586-588
Personality, observational measures of, 489-491
 similarities and differences in, 96-98
Personality tests, 485-492
 public criticism of, 491-492
Phenomenal environment, 44
Picture Situations Index, 488
Play patterns, preschool, 131-132
Play therapy, 528
Prairie City, 112
Praise, effect on learning, 220
Prediction, in education, 13
Prejudice, 161-165
Prejudice, race, 558
Preschool years, relations with others during, 131-134
Prescientific concepts, 77, 217, 248-249
 as a basis for understanding behavior, 4-5, 16
Preventive Psychiatry Program (Iowa), 409
Prince Edward County, Virginia, 557
Private schools, 478

Problem behavior, 171-206
 among boys, 195-199
 and anxiety, 176-177
 anxiety as a basis for, 182-184
 and conflict, 190-192
 dealing with, 181-182
 discouragement as a factor in, 199-201
 everyday types, 175-177
 and failure, 200
 and morale, 199-200
 parents' attitudes toward, 173-174
 prevalence of, 177-181
 and punishment, 181
 and school policies, 201-206
 and social class backgrounds, 192-194
 teachers' attitudes toward, 171-174
Problem-solving ability, sex differences in, 294
"Progressive education," 410
Project method, 393-394
Projection, 186
Projective tests, 488-489
Psychiatrists, 583-584
Psychology, defined, 3
 specialities in, 15-17
Psychosocial crises, 77-78
Public relations, of schools, 616-619
Punishment, 349, 358-360
 in learning, 217-223
 parental, 116, 187-188
 physical, 204-205
 and problem behavior, 181-182
Pupil progress, reporting, 457-460
Pupil team teaching, 392
Purdue University Opinion Poll, 197-198
Purpose, in behavior, 50-52

Random grouping, of students, 522
Rationalization, 184
Read, learning to, 246-247
Reading problems, 524-526
Reading-readiness tests, 483
Reality, perceptual aspects of, 45-56
Rebelliousness, among adolescents, 194-195
Recreational interests, 74
Regression, 188
Reinforcement, 217, 286
 delay in, 565-566
 in learning, 38-39, 254-261
 postponement of, 553
 social, 551-553, 562-564
 of socially disadvantaged children, 562-564

- Rejection, effect of, 37
 Reliability, of tests, 444-445
 Repression, 185-186
 Retention, when "taught properly," 224-227
 Reward, intrinsic and extrinsic, 285-286
 in learning, 217-223, 319
 see also Reinforcement
 Rigidity, in perception, 336
 in thinking, 162
 Role conflicts, for teachers, 627-631
 Rorschach test, 489
 Rural children, problems of, 122

 Scholastic Aptitude Test (SAT), 445-446
 School, responsibility for children, 65
 School nurse, 584
 School phobia, 193-194
 School psychologist, 582-583
 School social worker, 583
 Scientific method, as incompatible with prejudice, 162
 Scores, interpretation of, 435
 Secondary teachers, attitudes of, 411
 "Self," the, 42-44
 Self-acceptance, in children, 105
 Self-actualization, 32-33
 Self-concept, 44-45, 62
 and physical maturity, 80
 Self-control, and school success, 297-298
 Self-discipline, 349
 Self-ideals, of children, 152
 Self-punishment, 185
 Self-structure, 45-46
 changes in, 293
 Self-understanding, importance for teachers, 611-612
 Sentence-completion test, 489
 Set, educational, 300
 Sex differences, in intelligence, 473-475
 Shyness, 187-188
 Skinner, B. F., 217, 442, 552
 Slow learners, 514-515
 Slum environment, 546-547
 Social class, 111-124
 and attitudes toward education, 118
 effect on IQ, 473
 and the socially disadvantaged child, 543-572
 Social learning, 39, 551-553, 562-564
 Social psychology, 17
 Social reinforcement, 39, 551-553, 562-564
 Social relations, 129-164

 Socially disadvantaged learners, 543-572
 homes of, 549-551
 mental growth of, 554-556
 persistence in, 566-567
 in preschool situations, 547-549
 reinforcement of, 562-564
 relationships with teachers, 559
 remedial programs for, 559-572
 Sociogram, 143
 Sociometric status, 73
 and adjustment, 146-147
 and IQ, 148
 and school success, 142, 147
 Sociometry, 142-149, 489, 533
 Special aptitude tests, 482-483
 Special education, 503-536
 content of, 507-508
 Special instruction, need for, 585-586
 Speech problems, 525-528
 Spelling, 234
 SPSSI (Society for the Psychological Study of Social Issues), 531
 Stage setting, in classroom management, 364-365
 Standard deviation, 453-454
 Stanford-Binet Scale, 468-469
 Stanine scores, 454
 Statistics, 20, 451-454
 Stimulation, need for, 39-40
 Structure, initiation of, 353-354, 365
 Stuttering, 525
 Superego, 369
 Symonds Picture Story Test, 489
 Systems and theories of education, 18

 Teacher, changing role of, 5-6
 importance of, 317-320
 psychology of being, 611-643
 relationship to classroom group, 151-153
 see also Teachers
 Teacher-centered methods, 331-333
 Teacher direction and control of learning, 324-327
 Teachers, administrative roles of, 612-619
 as applied scientists, 20
 as artists in human relations, 619
 authoritarian attitudes of, 626
 as catalysts, 620
 as classroom managers, 614-615
 as clerks, 615
 democratic attitudes of, 626

Subject Index

- Teachers, experiences of, 18-19
 - as group builders, 620
 - independence among, 626
 - instructional roles of, 612-619
 - as interpreters to public, 616-619
 - as learners and scholars, 623
 - as mental-health workers, 620-621
 - as models, 614
 - morale of, 155
 - as parent figures, 624
 - as Peace Corps volunteers, 622-623
 - as power-seekers, 625-626
 - professional consciousness of, 14-15, 636
 - professional status of, 5-6
 - psychologically oriented roles of, 619-621
 - and the search for security, 626-627
 - self-oriented roles of, 621-627
 - as social-service workers, 622
 - as targets for community pressure, 636
 - as targets for hostility, 636-637
 - as youth-group workers, 615-616
- Teaching, disintegrative factors in, 627-638
 - integrative factors in, 638-643
 - preoccupation with, 8
 - status of, 641-642
- Teaching ability, described, 431
- Teaching machines, 256-258, 388-389
- Team teaching, 387-388
- Tehran, 84-85
- Television, educational, 385, 476
- Terman, L. M., 468, 517
- Territorial rights, 62
- Test anxiety, 308, 475
- Testing programs, state and national, 454-457
 - effect on curricula and teaching methods, 457
- Tests, achievement, 450-451
 - choice-type or objective, 439-444
 - completion, 442-443
 - diagnostic, 450
 - essay, 437-439
 - intelligence, 446, 467-482
 - interpreting results of, 451-454
- Tests, matching type, 443
 - multiple-choice type, 440-441
 - personality, 485-489
 - reliability and validity of, 444-447
 - standardization of, 447-457
 - teacher-made, 436-447
 - true-false type, 440
- Thematic Apperception Test (TAT), 526
- Theories of education, 18
- Thorndike, E. L., 265
- Traditional approaches to education, deficiencies
 - and learner-centered methods, 410
 - and strengths of, 379-380
- Trinidad, 100
- Unconscious motivation, *see* Awareness
- Underachievers, 478-482
 - and parental attitudes, 480-481
- Understanding, explained, 10-14
 - sources of, 14-19
- Upper class, 112, 478
- Urban children, 122
- Validity, of tests, 445-447
- Values, effect of teachers', 319
 - learning of, 95
- Veterans, civilian adjustment of, 69
- Virginia, 556-567
- Vocational choice, problems of, 589-590
- Vocational counselors, 581-582, 589-590
- Washington, D.C., 571-572
- Watts, riots in, 544
- Wechsler, D., 470
- Wholes vs. parts, in learning, 300-304
- Winnetka Plan, 390
- Women, status of, 109
- Work-study programs, 594
- Working class, *see* Lower class
- Yankee City, 111-112
- Zuñi, 106, 141



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